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OUR HISTORIC DESERT, The Story of the Anza-Borrego State Park. Text by Diana Lindsay, Edited by Richard Pourade. The largest state park in the United States, this book presents a concise and cogent history of the things which have made this desert unique. The author details the geologic beginning and traces the history from Juan Bautista de Anza and early-day settlers, through to the existence today of the huge park. Hardcover, 144 pages, beautifully illustrated, \$9.50.

FLOWERS OF THE CANYON COUNTRY by Stanley L. Welsh, text; and Bill Ratcliffe, photographs. Brigham Young University Press. Two professionals have united their talents to present an informative, scholarly and artistic promotion of the beauty found in flowers and plants of vast regions of the Southwest. Paperback, 51 pages, \$2.95.

A FIELD GUIDE TO INSECTS of America North of Mexico by Donald J. Borror and Richard E. White. This is the most comprehensive, authoritative and up-to-date guide to North America insects ever published. It covers 579 families of insects and has more than 1300 line drawings and 142 color plates. Hardcover, 372 pages, glossary, references, \$5.95.

FANTASIES OF GOLD by E. B. Sayles. During his search for archeological finds for more than 30 years, the author was exposed to the rumors and legends of lost gold and treasures. After his retirement as curator of the Arizona State Museum, he classified and delved into these still unsolved mysteries. An interesting and informative book on lost bonanzas and legends, many of which have never been published. Hardcover, well illustrated, 135 pages, \$6.50.



THE CALIFORNIA MISSIONS by the Editors of Sunset Books. A beautifully written history of California's 21 missions. One can feel, as he reads, the ferver of the padres as they gathered materials to build their churches, and an insight into history develops as the authors tell in simple prose what was going on in the world at the same time. 300 pages, complete with artful sketches and photographs, and paintings in color, hardcover, large format, \$12.75.

NEVADA GHOST TOWNS AND MINING CAMPS by Stanley W. Paher. Covering all of Nevada's 17 counties, Paher has documented 575 mining camps, many of which have been erased from the earth. The book contains the greatest and most complete collection of historic photographs of Nevada ever published. This, coupled with his excellent writing and map, creates a book of lasting value. Large 9x11 format, 700 photographs, hardcover, 492 pages, \$15.00.

BOOKS OF

THE GREAT AMERICAN WEST by James D. Horan. With over 650 illustrations, many in full color, this is the full western story from the days of the conquistadores to the 20th Century. Many rare photos never published before. Large 9x12 format, hardcover, 288 pages, originally published at \$10.00, now only \$4.95.

FROSTY, A Raccoon to Remember by Harriett E. Weaver. The only uniformed woman on California's State Park Ranger crews for 20 years, Harriett Weaver shares her hilarious and heart-warming experiences of being a "mother" to an orphaned baby raccoon. A delightful book for all ages. Illustrated with line-drawings by Jennifer O. Dewey, hard cover, 156 pages, \$5.95

DICTIONARY OF PREHISTORIC INDIAN ARTIFACTS OF THE AMERICAN SOUTHWEST by Franklin Barnett. A highly informative book that both illustrates and describes Indian artifacts of the Southwest, it is a valuable guide for the person interested in archaeology and anthropology. Includes 250 major types of artifacts. Each item has a photo and definition. Paperback, 130 pages, beautifully illustrated, \$7.95.





OLD MINES AND GHOST CAMPS OF CALIFORNIA, compiled by A. Ekman, I. H. Parker, W. H. Storms, H. W. Penniman and M. E. Dittmar. A lot of informative reading takes you county by county through the vast mining areas of the Mother Lode and adjoining rich properties. Paperback, photos, 144 pages, \$3.50.

OUTDOOR SURVIVAL SKILLS by Larry Dean Olsen. This book had to be lived before it could be written. The author's mastery of primitive skills has made him confident that survival living need not be an ordeal once a person has learned to adjust. Chapters deal with building shelters, making fires, finding water, use of plants for food and medication. Buckram cover, well-illustrated, 188 pages, revised edition boasts of 96 4-color photos added. \$2.95.

PONDEROSA COUNTRY by Stanley W. Paher. A scenic and historic guide to Reno and vicinity, the author tells in words and pictures the many scenic byways and colorful country to be found within an hour or two of downtown "Casino Row." Various tours are outlined and a final chapter is devoted to a pictorial history of Reno. Paperback, 48 pages, 9x12 format, \$1.95.

ROCK DRAWINGS OF THE COSO RANGE by Campbell Grant, James Baird and J. Kenneth-Pringle. A Maturango Museum publication, this books tells of sites of rock art in the Coso Range which, at 4000 feet, merges with the flatlands of the northern Mojave Desert. Paperback, illustrated, detailed drawings, maps, 144 pages, \$3.05.

THE DESERT IS YOURS by Erle Stanley Gardner. This is the late author's fifth book written on the desert but the first that is devoted to the western desert of the United States. With parties of hunters and companions, he proves to be the true adventurer, combing the vast reaches of trackless land, and shows how the good outweighs the bad in the perils of the desert. Hardcover, well illustrated, 256 pages, \$7.50.

DEATH VALLEY GHOST TOWNS by Stanley Paher. Death Valley, today a National Monument, has in its environs the ghostly remains of many mines and mining towns. The author has also written of ghost towns in Nevada and Arizona and knows how to blend a brief outline of each of Death Valley's ghost towns with historic photos. For sheer drama, fact or fiction, it produces an enticing package for ghost town buffs. Paperback, illus., 9x12 format, 48 pages, \$1.95.

EARTHQUAKE COUNTRY by Robert lacopi. Published by Sunset Books, this well illustrated book separates fact from fiction and shows where faults are located, what to do in the event of an earthquake, past history and what to expect in the future. Large format, slick paperback, 160 pages, \$2.95.

DESERT, The American Southwest by Ruth Kirk. Combining her knowledge of the physical characteristics of the land, and man's relation to the desert from the prehistoric past to the probable future, with her photographer's eye and her enthusiasm for a strange and beautiful country, the result of Ruth Kirk's work is an extraordinarily perceptive account of the living desert. Highly recommended. Hardcover, beautifully illustrated, 334 pages, \$10.00.





GOLD RUSH ALBUM, Editor in Chief Joseph Henry Jackson. 352 authentic first-hand pictures with text. The complete story of the most exciting treasure-hunt in history when some 200,000 persons sought gold in California. Originally published at \$10.00. New, complete edition only \$3.95.

BICYCLE TRAILS OF SOUTHERN CALIFOR-NIA by David Kurk and Robert Miller. Sixtynine trails, including sidetrips, ranging from three to fifty miles in both rural and urban areas. Illustrated, maps, terrain description, paperback, 128 pages, \$1.95.

PADRE ISLAND [Treasure Kingdom of the World] by William Mahan. At the age of 13 the author had done research on lost treasure and completed a scrapbook on the subject. In later years, he discovered "Padre Island" off the coast of his home state of Texas. Bill Mahan is well qualified for his work having made countless trips to Padre where he relates in historical detail of lost treasures, shipwrecks and savage Indian tribes. If you are a historian or treasure hunter, you'll "dig" this adventurous accounting. Hardcover, illus., maps, translations of Fray Marcos de Mena from Spanish to English, 139 pages, \$6.95.

THE WEST

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BOTTLE COLLECTOR'S HANDBOOK by John T. Yount. Contains a listing of 1850 bottles and their market value (including the prized Jim Beams), where to sell and buy, identifications, etc. Although contains few illustrations, it has more listings than any other bottle book. Paperback, 89 pages, \$3.95.

FOUR WHEEL DRIVE HANDBOOK by James T. Crow and Cameron Warren. Packed into this volume is material gathered from actual experience and presented in a detailed manner so it can easily be followed and understood. Highly recommended for anyone interested in back country driving. Paper, illus., 96 pages, \$3.95.

THE WEEKEND GOLD MINER by A. H. Ryan. An electronic physicist "bitten by the gold bug," the author has written a concise and informative book for amateur prospectors telling where and how gold is found and how it is separated and tested, all based on his own practical experience. Paperback, 40 pages, \$1.50.

THE WEEKEND TREASURE HUNTER by A. H. Ryan. A companion book to his Weekend Gold Miner, this volume is also concise and packed with information on what to look for and what to do with your treasure after you have found it. Subjects range from Beach Combing to Sunken Treasures, Paperback, 76 pages, \$1.95.

FIELD GUIDE TO WESTERN BIRDS by Roger Tory Peterson. The standard book for field identification sponsored by the National Audubon Society. 2nd edition, enlarged with new section on Hawaiian birds. 658 in full color. Hardcover, \$5.95.





RELICS OF THE REDMAN by Marvin & Helen Davis. Relics can be valuable! Those dating back to Indian history in our land are becoming almost priceless. How to search for these "hard to find" Indian relics, where to search and at what time of the year, and types of tools needed, are among the many helpful suggestions given. Large format, many color and b/w illustrations, a striking cover. Paperback, 63 pages, \$3.95.

ROCKS AND MINERALS OF CALIFORNIA compiled by Vinson Brown, David Allan and James Stark. This third revised edition will save you hours of time by the description and pictures of rocks and minerals found in this state. Color pictures with clearly developed keys show you how to identify what you have found and gives you the fine tools to increase your ability as a field collector. Paperback, well illustrated with photos, locality maps, charts and quadrangle map information. 200 pages, \$3.95.

DESERT GARDENING by the Editors of Sunset Books. A "how to" book on what is different about gardening in the desert. A thorough and helpful book, it covers areas of Arizona's High Desert, High Desert of New Mexico and Texas, California's Medium to High Desert, Arizona's Intermediate Desert and Low Desert of California and Arizona. Paperback, illus., 96 pages, \$1.95.

MINES OF THE HIGH DESERT by Donald Dean Miller. Describes life at the New Dale, Virginia Dale, Supply and other early mines of the high desert country around Joshua Tree National Monument in California. Photos and map. Paperback, \$1.95.

NEVADA LOST MINES AND HIDDEN TREAS-URES* compiled by Dave Basso. The Second Edition is updated with photographs and a new look. Portions of U.S. Geological Survey topographic maps are provided to give the reader an idea of the general locale in which the specific story is centered. Paperback, 71 pages, \$2.50.

NEW MEXICO PLACE NAMES edited by T. M. Pearce. Lists and gives a concise history of the places, towns, former sites, mountains, mesas, rivers, etc., in New Mexico, including those settled by the early Spaniards. Good for treasure hunters, bottle collectors and history buffs. Paperback, 187 pages with more than 5000 names, \$2.45.





HAPPY WANDERER TRIPS by Slim Barnard. Well-known TV stars, Henrietta and Slim Barnard have put together a selection of their trips throughout the West from their Happy Wanderer travel shows. Books have excellent maps, history, cost of lodging, meals, etc. Perfect for families planning weekends. Both books are large format, heavy paperback, 150 pages each and \$2.95 each. Volume One covers California and Volume Two Arizona, Nevada and Mexico. WHEN ORDERING STATE WHICH VOLUME.

SOUTHWEST INDIAN CRAFT ARTS by Clara Lee Tanner. One of the best books on the subject, covering all phases of the culture of the Indians of the Southwest. Authentic in every way. Color and black and white illustrations, line drawings. Hardcover, 205 pages, \$15.00.

TURQUOIS by Joseph E. Pogue. [Memoirs of the National Academy of Sciences]. First printed in 1915, Turquois has in its third printing (1973) been updated in many ways. Among them are listed currently-operated Turquois mines, more color plates. The book is full of incredible results of research and an in-depth study of this fascinating mineral of superficial origin. Hardcover, 175 pages, beautifully illustrated, \$15.00.

PLANTS USED IN BASKETRY BY THE CALI-FORNIA INDIANS by Ruth Earl Merrill. Seventy-odd plant species, their uses and combined uses, limitations, patterns, waterproofing, etc., are all brought into focus in an easily-read presentation. Appendix lists basket materials according to part, use and Tribe. Paperback, 25 pages, \$2.00.

DUTCH OVEN COOKBOOK by Don Holm. Wildlife editor of the Portland Oregonian, the author has spent his life exploring and writing about the outdoors, so his recipes for preparing food in a Dutch Oven come from experience. If you haven't had food cooked in a Dutch Oven, you haven't lived—and if you have, you will find these recipes new and exciting culinary adventures—as well as his tyle of writing. Heavy paperback, 106 pages, \$3.95.

ANASAZI: Ancient People of the Rock, photographs by David Muench, text by Donald G. Pike. This outstanding, moving publication gives the reader the unique opportunity to see and understand the Anasazi civilization that existed some 2,000 years ago. Blending with David Muench's suberb photography, historian Donald Pike provides a fascinating text. Hardcover, profusely illustrated with color and black and white photos, 192 pages, \$16.95 until Dec. 31, 1974, then \$18.95.

GOLDROCK Facts and Folktales by Iva L. Geisinger. The author describes this site on the California Desert giving brief, but interesting recounts of the facts and legends of the ghost towns, lost mines and personalities of the Goldrock area. Paperback, 65 pages, illus., \$2.25.



LAS VEGAS [As It Began—As It Grew] by Stanley W. Paher. Here is the first general history of early Las Vegas ever to be published. The author was born and raised there in what, to many is considered a town synonymous with lavish gambling and unabashed night life. Newcomers to the area, and even natives themselves, will be surprised by the facts they did not know about their town. Western Americana book lovers will appreciate the usefulness of this book. You don't have to gamble on this one! Hardcover, large format, loaded with historical photos, 180 pages, \$10.95.

A LIGHT-HEARTED LOOK AT THE DESERT by Chuck Waggin. A delightfully written and illustrated book on desert animals which will be appreciated by both children and adults. The sketches are excellent and, although factual, descriptions make the animals seem like human beings. Large format, heavy quality paper, 94 pages, \$1.95. Clyde Forsythe's Famous . . .

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TRAILS OF THE ANGELES 100 Hikes in the San Gabriels By John W. Robinson

The San Gabriel Mountains of Southern California offer a wide gamut of entertainment for the outdoor enthusiast.

One of the most popular is hiking and backpacking.

The author has produced a concise package of 100 hikes in the mountains he loves and knows so well. A frequent contributor to the pages of Desert Magazine and author of San Bernardino Mountain Trails and Camping and Climbing in Baja, his Trails of the Angeles is the most complete guide ever written to hiking in the San Gabriel Mountains, the backvard of Los Angeles.

The trail trips have been graded on the writer's evaluation as "easy," "moderate" or "strenuous." An "easy" trip is usually four miles or less, with less than 500 feet elevation gain. A "moderate" trip is a five-to-ten-mile hike with usually less than 2500 feet elevation difference. "Strenuous" trips are all-day rambles involving many miles of hiking and much elevation gain and loss.

The writer has walked, recorded and researched all trips in this volume. Due to fire danger, certain areas of the mountains are closed from July 1st until November or December when the first appreciable rainfall occurs.

With chapters on Hiking Hints, Mountain Courtesy, Man in the San Gabriels, plus a three-color guide map, it all adds up to a great package for hiking buffs.

Paperback, illustrated, 256 pages, \$4.95.



MINING CAMPS AND GHOST TOWNS A History of Mining in Arizona and California By Frank Love

This book is the dramatic history of the mineral frontier as it affected one section of the vast American West-the Lower Colorado Region. Venerable and colorful Yuma, Arizona, on the river, was, and still is, the nerve center of the harsh wilderness which straddles the Arizona-California border.

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BEACHES OF BAJA by Walt Wheelock. Beaches on the Pacific side of Lower California are described by the veteran Baja explorer. Unlike California beaches, they are still relatively free of crowds. Paperback, illustrated, 72 pages, \$1.95.

JOURNEY OF THE FLAME by Walter Nordhoff. The most exciting tale of early Baja and Alta California ever written. Recounts lost treasure legends and is accurate historical account presented in fictional style. Hardcover, \$4.95.

CAMPING AND CLIMBING IN BAJA by John W. Robinson. Contains excellent maps and photos. A guidebook to the Sierra San Pedro Martir and the Sierra Juarez of upper Baja Calif. Much of this land is unexplored and unmapped still. Car routes to famous ranches and camping spots in palm-studded canyons with trout streams tempt weekend tourists who aren't up to hiking. Paperback, 96 pages, \$2.95.

BYROADS OF BAJA by Walt Wheelock. In addition to describing the many highways now being paved, this veteran Baja explorer also tells of back country roads leading to Indian ruins, missions and abandoned mines. Paperback, illustrated, 72 pages, \$1.95.

BAJA [California, Mexico] by Cliff Cross. Updated to include the new transpeninsular highway, the author has outlined in detail all of the services, precautions, outstanding sights and things to do in Baja. Maps and photos galore, with large format. 170 pages, \$3.95.

BAJA CALIFORNIA by Choral Pepper. Packed in this comparatively small book is a world of facts about the land, the insects, vegetation, the seashore, the missionaries, vanished missions, lost treasures and strange stories, tall and true, of Baja California. Fascinating reading. Paperback, 126 pages, \$1.95.

BAJA CALIFORNIA OVERLAND by L. Burr Belden. Practical guide to Lower California as far as La Paz by auto with material gleaned from extensive study trip sponsored by University of California. Includes things to see and accommodations. Paperback, \$1.95.

PALM CANYONS OF BAJA CALIFORNIA by Randall Henderson. The beautiful palm canyons and isolated areas of Baja California are described by the late Randall Henderson, founder of DESERT Magazine. Although these are his personal adventures many years ago, little has changed and his vivid writing is alive today as it was when he first saw the oases. Paperback, illustrated, 72 pages, \$1.95.

LOWER CALIFORNIA GUIDE BOOK by Gerhard and Gulick. Veteran travelers would not venture south of the border without this authoritative volume. It combines the fascinating history of every location, whether it be a town, mission or abandoned ranch, with detailed mileage maps and locations of gasoline supplies, water and other needed information on Baja. 243 pages with 3-color folded map, 16 detailed route maps, 4 city maps, 22 illustrations. Hardcover, \$6.50.

THE BAJA BOOK, A Complete Map-Guide to Today's Baja California by Tom Miller and Elmar Baxter. Waiting until the new transpeninsular highway opened, the authors have pooled their knowledge to give every minute detail on gas stations, campgrounds, beaches, trailer parks, road conditions, boating, surfing, flying, fishing, beachcombing, in addition to a Baja Roadlog which has been broken into convenient two-mile segments. A tremendous package for every kind of recreationist. Paperback, 178 pages, illus., maps, \$7.95.

FLORA OF BAJA NORTE by Tina Kasbeer. The author is a botanist who spends all her free time in Baja and writes in detail of the endemic plants of the country. Describes the use of certain plants for medicinal purposes by the Indians and residents. Paperback, illus. 36 pages, \$1.00.

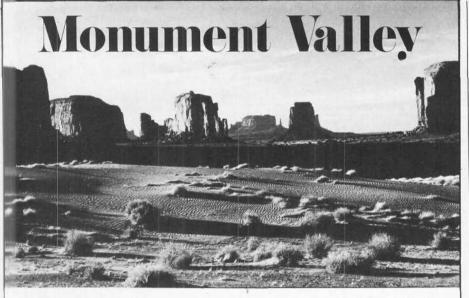
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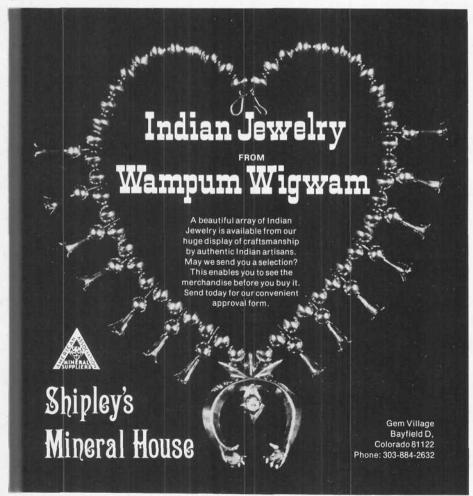
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In this revealing and exciting history of the Colorado River's Mining Camps and Ghost Towns, Professor Love has dug deep and thorough to reconstruct the almost forgotten story. It takes rugged endurance to seek out the moldering, decaying mine-sites and town-sites where millions of dollars in mineral loot was dug out of the area's prodigal earth.

It has taken exhaustive research to piece together the incredible story of such places as La Paz, Picacho, the Harqua Halas, the Cargo Muchachos and along the old trail the Spaniards named El Camino Diablo (the Devil's Highway), and to tell the story of the hardy breed of gold and silver seekers who honeycombed the mountains and washes of the Lower Colorado with pannings, stripping, glory holes, placers and scores of deepshafted and paying mines whose dumps and tailings still remind today's inquisitive visitors of this vanished mining epic of another day.

Illustrated with both old and new photos, 192 pages, hardcover, \$7.95.



THE STORY OF CRATER LAKE NATIONAL PARK By Howard and Marian Place

Marian T. Place, a librarian, is the author of 38 books for adults and children, and of more than 200 feature magazine articles. She has devoted some 20 years to research journals, government field reports, surveys and other accounts of western gold rushes, cattle drives and railroad survey expeditions.

Howard Place is a native Montanan and great-grandson of a member of the first party of white men to discover gold there. Although this is the Places' first co authored book, it reflects their life time interest in the history of the West.

In their Foreword, Marian and Howard set the pace of this interesting and factual recount of one of America's most beautiful and unspoiled areas:

"The moment a great treasure is discovered, the wealth it promises lures thousands to the scene. A classic example was James Marshall's discovery of gold on the South Fork of the American River in California, on January 24, 1848, and the wild stampede that followed. Yet the opposite occurred less than five years later when a prospector accidentally discovered a deep blue body of water in the crater of an extinct volcano atop the Cascade Mountains in southern Oregon. John Wesley Hillman was searching for gold when he stumbled onto the wondrous lake. But since it was too remote for commercial exploitation, he turned away. The lake was soon forgotten.

"In time, men and machines stripped California and Oregon of much of their lustrous golden treasure. They scarred the landscape with glory holes, mine dumps and jimwracky camps. Meanwhile, the steep timbered approaches to the lake, rediscovered and named Crater Lake, were being destroyed piecemeal by uncontrolled forest fires and indiscriminate logging. Not long after that the lake itself was endangered by a harumscarum proposal to draw off the water for irrigation purposes. The officials of the state and the federal government locked horns over its ownership and administration. Oregon lost the argument, but gained a national park. Thus, today the

blue treasure, which Hillman discovered June 12, 1853 and now considered the eighth wonder of the world, remains undiminished in beauty and unspoiled, in spite of the fact that for decades countless visitors have looked down on Crater Lake's indescribably blue water.

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"While some accounts deal with the geology and natural history of the lake, our story centers on man and how he learned to cherish and conserve this extraordinary scenic wonderland."

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Arizona Cook Book



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The Wedge Of Gold

by KEN MARQUISS



THE OLD Pennsylvania Dutch farmer who sadly complained that he "got too soon oldt and too late schmart!" has lots of company. I should have heard about the wedge of gold 40 years ago, but didn't—and it still gripes me!

John and his wife, Helen and I were high school chums back in the depression days; and he *knew* I was interested in such things. When I hassled him about it recently (after he had told me the story) he merely shrugged and said, "Phooey! Ken, you were much too busy in those days chasing gold projects closer home to Redlands than to bother with an Oregon story—and besides, what spare time you had left you spent chasing Bess. I know! So don't blame me!"

Which was true enough.

Anyway, on a recent trip to Arizona, I

On the patio—AFTER the cats had gone to hunt in the grove—where I first heard Johnny tell about the shiny ''splitting wedge''—40 years late!

had dropped anchor for a chow-chat-andbed stop at John and Helen's delightful ranch style home, hidden away in a large orange grove near Redlands, California.

Early the next morning, we were lounging on his sunny patio waiting for Helen to get breakfast, and I was watching him short-feed a mass of cats. When I ribbed him about his stinginess with the cat food, he merely grunted and then said, "If I gave them all they wanted they wouldn't hunt so hard for gophers in the grove — what do you think I keep 'em for?" And I had to admit that it was easier and quicker than putting out gopher traps.

(His trees were loaded with luscious oversize fruit, and their table always groans with garden goodies; but whether his lean ecological traps have anything to do with those harvests, I don't know. But it gives a slant on the man and his practical approach to life—and gold stories!)

About half-way through the cat feeding, he suddenly said, "You know, Ken, if you run out of places to prospect in Arizona, you ought to go up in Oregon and hunt for some of those big wedgeshaped nuggets in the John Day River

Right: Johnny was just a grade schooler in "those darn knickers and long black stockings" back in 1919 at the Harris Ranch when he saw the wedge of gold. Below: Looking east from Highway 395 at the old Bull Springs Ranch buildings about 1919. Somewhere, "perhaps 20 miles or so" out north beyond the tree-covered ridge in the background, old Sank found the golden wedge while herding sheep. Photos courtesy of John Lovely.





Desert/August 1974

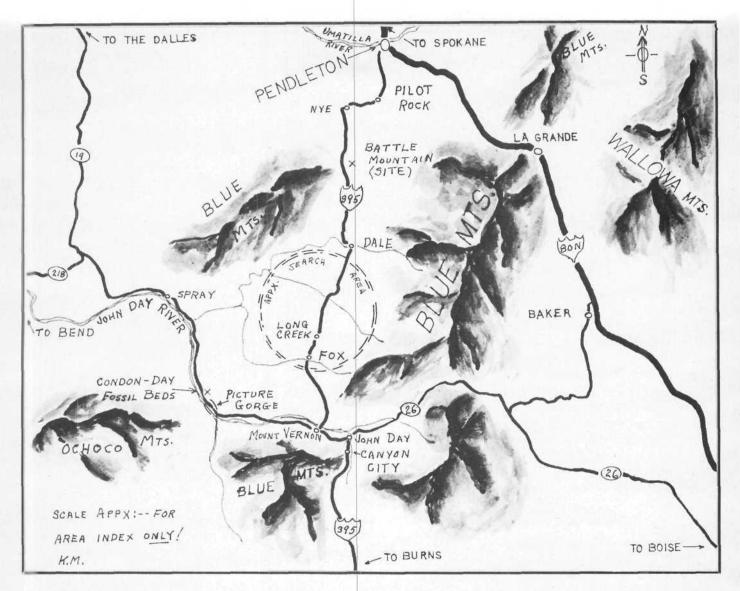
country, like the one old 'Sank' found so long ago.''

People who change the subject without warning like that distress me; so I made him wait while I went to the truck for my little sneaky tape recorder and pocket note book (which I use mostly for a blind), before I heard the rest of the story.

He said that back in the kid days when he was a grade schooler and "wearing those darn knicker-style pants and long black stockings," his stepfather ranched in the beautiful Fox Valley, high up at the edge of the yellow pines of Oregon's Malheur National Forest.

The northeastern Oregon towns of John Day, Fox and Long Creek straddle the well-known four-state Highway 395 that runs from the Mexican border near San Diego northward through Reno, Nevada, Pendleton, Oregon, and Spokane, Washington—thence on to the Canadian border. So getting to the search area is no problem.

And, a more beautiful and interesting summer prospecting locale would be hard to imagine. It's regular Paul Bunyan country—a north/south contact zone area between the sedimentary rocks con-



taining the Condon-Day Fossil Beds to the west; and the upthrust igneous intrusives of the high Blue Mountains to the east. It is the general locale of the early-day little narrow gauge "Rawhide Railway" (that actually ran on heavy wood rails capped with rawhide), the historic struggle scene of the Battle Mountain area; and the stomping grounds of an ancient Indian legend about "Tomahawk head gold hunks"—a legend laughed at by the white man as "nothing but typical Injun teepee smoke." Until Sank's time, that is!

The area is on the upper reaches of the John Day River drainage basin, and since the fish ladders were put in at The Dalles the salmon are beginning to return again to the upper tributaries to spawn; and crowd the local trout. On the land there are berries and game galore in season. And, it's in real gold country!

A short distance south of Fox, Highway 395 crosses the south fork of the John Day River, and follows up the river toward the towns of John Day and Canyon City.

Canyon City was established in the gold rush of 1862, and was the center of extensive hardrock gold mining operations in the old days. Between John Day and Prairie City, one of the largest gold dredges in the country (a regular steamboat-sized thing) once moved its own pond—on which it floated— up the valley, while mucking up the placer gold from the bedrock of the ancient river channels.

So the formations in the area are kosher for gold.

Johnny said that one late spring day, about 1919 as he remembers it, a sheepherder, locally known by the nickname of Sank, was herding a big flock for a rancher named Zirl Harris up northeast of the old Bull Springs Ranch, not far from Fox. "It was in the general area between Fox and the mountain known as Vinegar Hill."

It was after shearing and docking

time, the herd was large, and old Sank had his hands full with the wandering frisky half-grown lambs. The area was in an upthrust country, and there were scores of high rock ledges; and the sheep were constantly moving as they grazed on the lush green feed that grew near the ledges.

Like most sheep outfits, the Harris spread used black sheep and/or goats for tally markers. These are generally added to the regular flock of white sheep on a ratio of one to 75 or 100. Every couple of hours, a herder ordinarily makes a tally of these markers; and if one of the black ones is missing, it's a safe bet that there are a lot more sheep missing, too—and he'd better start looking fast.

On this morning, Sank suddenly found he was two markers short! So he scrambled to the top of the highest nearby ledge to have himself "a lookaround." As he pulled himself to the top of the ledge, a piece of rock came loose, was discarded, and when he put his hand on

the rock beneath, part of it felt sort of slick. But he was too worried about the missing sheep to investigate right then.

From his vantage point on top of the ledge, he soon spotted some of his lost sheep, moving away behind "a little cone-shaped sagebrush-covered hummuck southwest of him." He promptly whistled his dogs over that way to round up the wanderers. With a sigh of relief, he stopped to roll himself a smoke—and promptly dropped the makings—when he saw the shining yellow wedge of gold at his feet.

Johnny told me that the nugget looked ''like a small splitting wedge (for splitting firewood) and was roughly that general shape. If you tied it to a forked stick, it really would have made a pretty good tomahawk!'' Its size can be judged from what follows.

The camp tender came in with supplies the next morning, which was a good thing, or the sheep would have been abandoned right then. For Sank had once worked briefly in the mines, and he knew what he had.

Shortly thereafter, Sank drew his back pay at the Harris Ranch, and ''lit a shuck'' for the bright lights at Canyon City. There he sold his wedge-shaped nugget for \$3,012.00 to a gold buyer—and put on a spree that is still remembered by a few old-timers. He had been on protracted drunks before, but this time he figured he would play it smart.

He first got a haircut, shave and hot bath at the barber shop and changed into a clean set of tick-free "store-bought duds." Next, he reserved a room at the hotel; and then he went to see a certain merchant friend of his he felt he could trust, who grudgingly agreed to "bank" his drunk for him.

This system consists of an agreement, while cold sober, for the banker to hand out to the prospective binger at given times, a certain specified amount of his money (and *only* that amount), regardless of subsequent cork-happy begging, cursing or screaming. Ordinarily the "draw time" is set up for late afternoon, while the store is still open (and the binger is reasonably sane), and before each evening's drinking starts. That way the drinker isn't likely to be rolled for a large amount of cash, and the binge can be safely stretched out, until all the money is used up.

So with a \$2,800 bank, old Sank threw

a spree that was a spree. He drank and bragged, and saturated in booze and vanity, he treated anybody and everybody, and it really sweetened the tills of all the saloons in Canyon City, John Day and clear up to Prairie City.

It was a drunk to end all drunks—and finally led to delirium tremens and a jail hospital bed. After that, it was another month before he was fairly well dried out and ready to go back and get "a lot more of that tomahawk gold."

And right then was when Sank found out the price that old John Barleycorn always extracts for his gurgling pleasures, liquid-ego and stumblebum fun! He couldn't for sure find the high outcropping he had stood on—his memory was all fuzzed up, he was "too late schmart!"

Like a skeeter-bug on a still pond, he searched in frantic circles radiating out from what he was sure had been his old sheep-camp locale, until his meager grubstake ran out and he had eaten every careless jackrabbit in the area.

Johnny said that for years after that, old Sank kept up the fruitless search. He never again touched a single drop of booze; and he hunted his tomahawk gold whenever the snow was off the ground and he could mooch, chisel or earn a little grubstake money. "The only thing we could count on him for was lambing camp; and then he was gone again."

The zeal of Sank's dried-out days is understandable. If you figure the wedge at the old price of gold, and make a coldly realistic guess at the going average of about 810 fineness, and then add the buyers profit, you come up with a weight of almost 14 *pounds*! Which is a whale of a nugget in anybody's lexicon. Its price today should tally out a little better than \$20,000!

Sank's ultimate epilogue has since been lost in the dusty limbo of time.

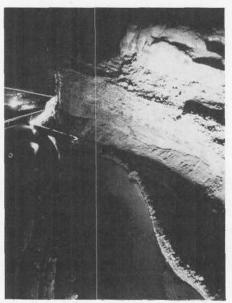
I've never hunted old Sank's tomahawk nugget area myself; but the more I think about it, and mull over Oregon road maps, the better it looks. It's in great summer loafing country; and if the politicians don't completely louse up the gas situation, I just might run into you at the annual "Whiskey Gulch Celebration," an old-timer-style shindig up at Canyon City in June!

At least, let's hope so.

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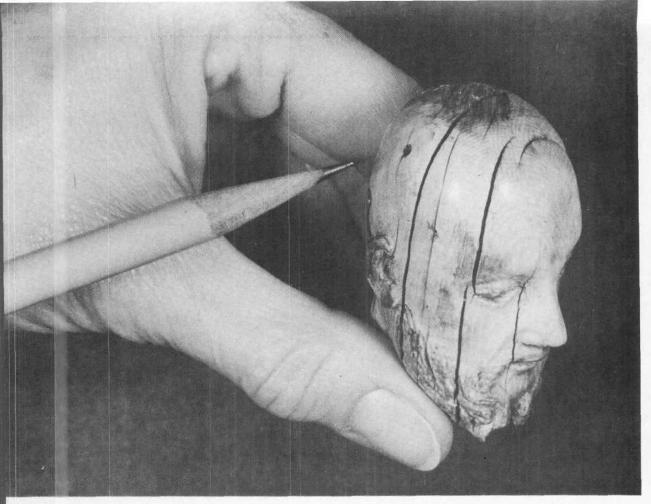
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The three tiny holes drilled into the top of the head provided the evidence that this carving was of Philippine origin. These holes are not found in similar artifacts created in Europe. Three "combs" were placed in these holes, carved to represent bursts of light or flame, symbolizing the three powers of Christ.

Mystery Carving

THE JANUARY 1974 issue of *Desert* described a finely detailed ivory carving discovered by Tom Malloy and his two sons on a muddy hillside in Portland, Oregon. They had asked the experts in Old World art forms at Portland's Art Museum, Oregon's Museum of Science and Industry and the Sonora Desert Museum in Phoenix for an identification. None could conclusively pinpoint its origin other than hazard a guess that it was carved from old ivory, was about 200 years old, was not of New World origin and that it probably depicted the head of Christ.

The "Oregon Mystery Carving" article was subsequently reproduced in the May issue of Catholic Digest eliciting a variety of suppositions as to its identity. The most authoritative response was received by Tom Malloy from Richard Ahlborn, Curator of History and Technology at the

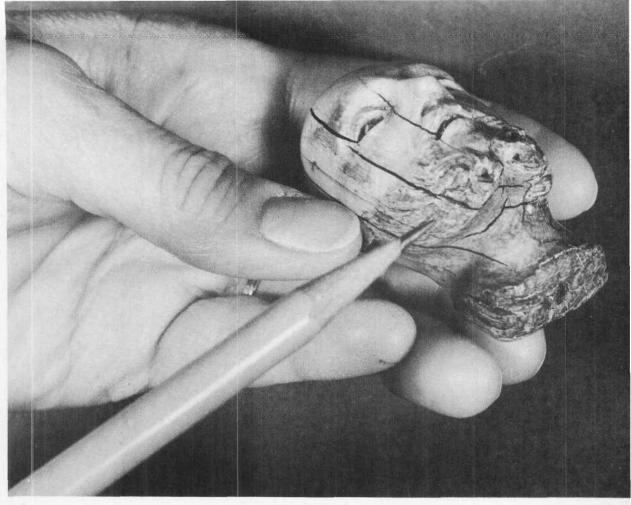
Smithsonian Institution in Washington.

Mr. Ahlborn said there were several important clues contained in the description that led to his identification of the tiny ivory carving-the most conclusive being the three tiny holes drilled into the top of the head. He said the carving is most definitely depicting the head of Christ and that the styling and craftman's technique paralleled that common to similar pieces of religious imagery created during a period of 17th and 18th Century Spanish colonialism in the Philippines. The three holes in the top of the head are indicative of a specific type of ornamentation used extensively during this period of Spanish colonialism both in the Americas and the Orient, according to Mr. Ahlborn. He said these holes were not used for affixing a crown of thorns or a halo as we had previously surmised. They were used for the placement of three

"combs" which were symbolic of the three powers of Christ. They were meticulously carved from ivory to represent bursts of light or flame.

The two holes drilled into the base of the beard are also indicative of the Spanish colonial influence. They were used to affix an extension to the beard which would have been difficult to carve into the original piece due to limitations of the size of the ivory-also because this extension would add to its fragility. The ivory was most likely of Indian or African origin, traded through the Orient into the Philippines. The Smithsonian would be unable to provide conclusive evidence that the ivory was of a particular type or age without a thorough analysis of its composition-a very expensive and time-consuming process.

Some had questioned the placid facial expression and ventured their opinions that it did not truly represent the face of



A second important clue leading to the identification of Oregon's Mystery Carving is the placement of holes at the base of the beard. An extension to the beard was affixed to these holes. Also shown here is the larger hole in the base of the neck used for attaching the ivory head to a wooden body.

Identified

by DON LIEN

a crucified Christ. Mr. Ahlborn said: "It may be representing Christ after crucifixion. There are several stages in which the physical agony does not appear—particularly noticeable in copies of European religious imagery created by Oriental craftsmen, as they don't respond to Him with quite the same cultural depth that a Christian would. The techniques and skills are there, but not necessarily with the psychological intensity evident in purely European renaissance art forms."

To substantiate the strengths of his convictions, Mr. Ahlborn said he had spent several years in the Philippines working under a Fulbright research grant. He had seen hundreds of carvings very similar in appearance while there. He also said there are examples of this type of art shown in a book titled, "Philippine Religious Imagery" authored by Fernando Zobel and printed

in Manila. (Only 400 copies of this book were published so don't expect to find it in your local library. On the west coast, copies may be seen at the Huntington Museum, The University of California at Berkeley and the Museum of International Folk Art in Santa Fe. There is also a copy in the Library of Congress.)

The carvings Mr. Ahlborn saw in the Philippines were generally found in the better homes, preserved in glass cases right in the parlor where they could be seen as you entered. Wooden bodies would be attached to the ivory heads and covered with clothing made of actual cloth, often with gold embroidery. The heads would be covered with human hair wigs, giving the figures a very natural appearance because of the flesh color of the ivory. Hands and arms would also be carved of ivory and pegged to the body.

How the "mystery carving" found its way to the muddy hillside below Tom

Malloy's home is anybody's guess. Mr. Ahlborn felt that our supposition that it was brought here by a Spanish galleon is correct. He shared our opinion that it could have been recovered from a ship wrecked along our coast in the late 1700s, or it could have been created in the Orient for the Spanish-American trade. The missing parts to this figure most likely are still buried in the area where the head was discovered, although the clothing and wooden body would have decayed a century or two ago. The hands and arm, the three combs and the gold embroidery are probably still there. As the Spanish trade galleons rarely came up the Columbia more than a few miles-just far enough to replenish their casks with fresh water-someone on foot, perhaps a trader, trapper or Indian, walked the trail into Old Portland and lost a valuable religious artifact years and years ago.

ALL I NEEDED was a 'coon skin cap to make the scene more reat. My thoughts and the country around me already reflected a time nearly 200 years ago when white fur traders were pushing west into unknown territory.

I was canoeing through the wilderness in the shadow of the great Teton Range of Wyoming. This is part of Grand Teton National Park, but it's an area seen by fewer than 10 percent of the park's visitors.

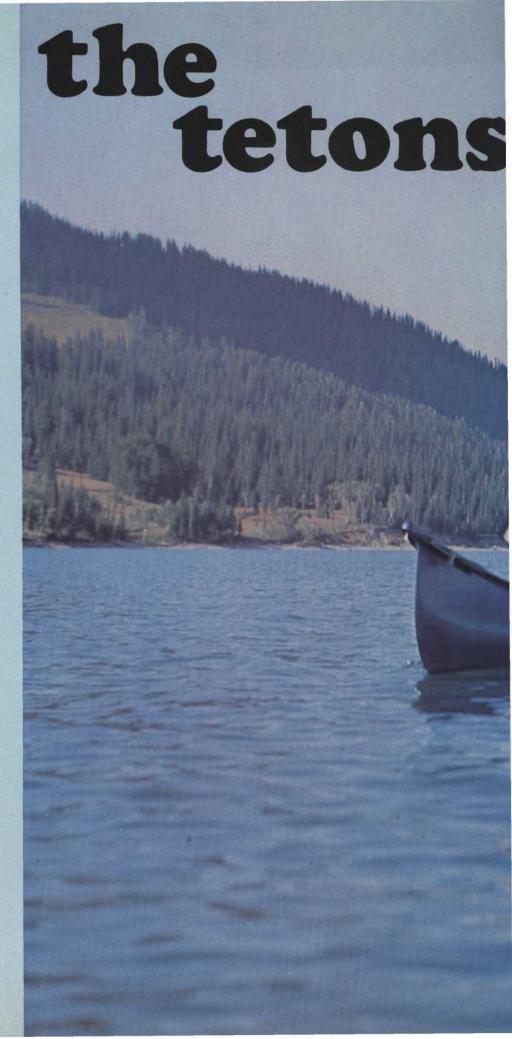
I was taking a vacation and seeing a part of America's natural beauty from a viewpoint shared by few others. The bonus of this kind of trip was being able to let my mind wander undisturbed back to the time when the first white men came this way. I could do it easily, because there was nothing in sight to remind me of the modern world.

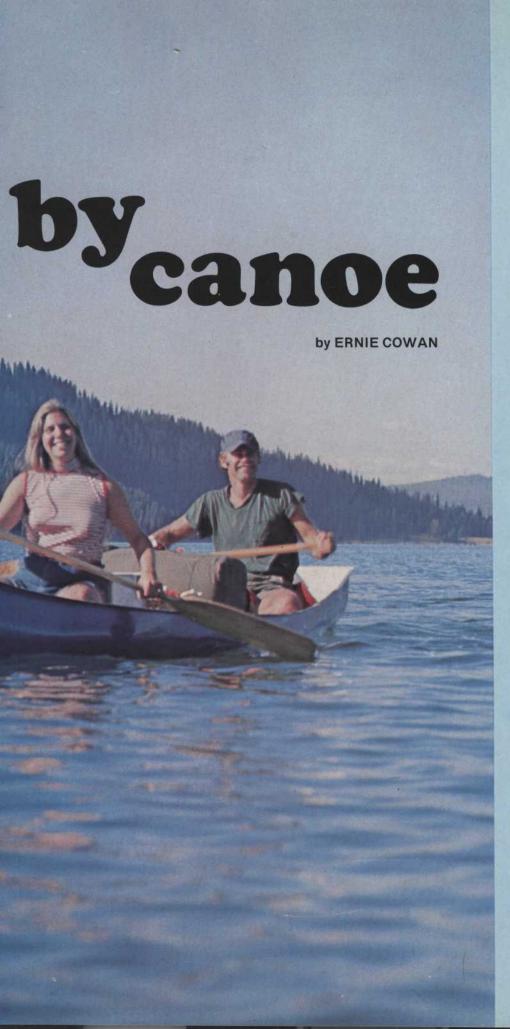
There were six in our group and we were paddling three canoes silently across the waters of Jackson Lake, the largest lake in the park. As an early autumn storm boiled in over 13,776-foot Grant Teton Peak, my mind wandered back to the time of John Colter and Jim Bridger, pioneers who left a mark on this place. They, too, had used canoes to explore the game-rich forests of this area. How exciting to be able to share some of the views they must have marveled at in their travels.

You can make your own canoe trips in Teton National Park, by either bringing your own boat or renting those available. But for the newcomer, it's best to enlist the aid of a guide. We selected a package trip offered jointly by the American River Touring Association of Oakland, and Parklands Expeditions of Jackson Hole, Wyoming.

We chose this particular trip because of the experience and reputations of the companies. ARTA is a well-established, non-profit outfit that specializes in running western rivers, and Parklands is well known for the quality horseback, ski tours and canoe trips it provides. As first-time visitors to this vast wilderness, we found a guided trip offered much more than if we had tried to find our own way.

It's not a matter of getting lost, but a guide knows details about the country that no guidebook can offer. And a guide can tell about his experiences or stories at the right psychological moment to create a mood, or bring a scene to life.





Our group was an interesting crosssection of people. There was Charles Thomsom, a reporter for the *Philadelphia Bulletin*; Harriett Charnow and Janice Moerschel, nurses from Boston; Jim Huie, a city fireman from Escondido, California; myself, and our guide, A. J. DeRosa.

For the most part, we all began the trip as strangers, but by week's end we were strong friends—people thrown together in a human stew, with each person an important ingredient of the successful mix.

Our adventure began at Flagg Ranch, near the southern boundary of Yellowstone National Park. Here we loaded our canoes with supplies and personal gear for a week and were soon being carried south in the swift current of the Snake River.

In the first minutes of the trip, our guide "A. J." gave us all a crash course in handling our canoes. It was a special crash course for Jim and I, since we hit nearly every rock in the river. But it was worth the instruction, because we developed a new technique for paddling known as the "zipper stroke." We covered a lot of water with this amazing technique.

To be truthful, we had our troubles coordinating our paddling, so we were constantly zig-zagging from one side of the river to the other.

"Well, we're getting our money's worth, because we're seeing both sides of the river," Jim said as the others kidded us about our zipper stroke.

It didn't take very long, however, before we learned to pull together, and soon we could glide along effortlessly for hours. By mid-week, we actually looked forward to canoeing. It became second nature to paddle, and you developed a rhythm that would let you move rapidly along at a constant pace over smooth water.

It was during the first few hours, while we were flowing toward Jackson Lake on the Snake River, that the tone was set for the whole trip. One of the first sights pointed out to us by our guide was a bald eagle, the symbol of America, soaring over us in command of his domain. Nearby, an osprey watched our passing from his perch in a dead pine tree.

A short time later, the current of the Snake River carried us into the backwaters of Jackson Lake and smack into a flock of Trumpeter Swans, the largest water fowl in North America. We managed to get quite close to these huge birds in our silent boats.

What a magnificent sight as the swans, geese and Great Blue Heron took flight at our arrival, each group fleeing in their own formations, only to circle back as we passed and land where they were.

As Jackson Lake widened into a vast body of water, we hugged the west shore which is still wilderness, untouched by road or modern improvements. We made our first night's camp at a place known as Harem Hill. We were amazed as A.J. prepared a meal fit for kings that night on a wood fire built in a three-sided firebox he carried along. We gorged ourselves on steak, fresh salad, fruit and wine.

That night around the campfire, A. J. explained that the firebox was used so that fires were not built on the ground.

"A ground fire leaves a scar, and if every group made a different ground fire at each camp, the wilderness would be rather messed up," A.J. said.

Each day the cold ashes were dumped

in plastic bags and carried out, along with all of our trash. Nothing was left in the wilderness. As food boxes were emptied of food, they were filled with trash.

Meal time soon became a group event, with each of us taking responsibility for one course. That's another good point about going on an organized trip. They have plenty of experience in providing food, and it was the best.

Sunrise the second day was to a threatening sky. A cold wind buffetted the billowing clouds that hung at the same level with flat bottoms. They looked like smashed potatoes pressed against the window of heaven.

We loaded our boats early and set off to the south into the teeth of a cold wind. As we rounded a point a short distance from camp, a pair of feeding moose didn't even pause to acknowledge our passing. If we had been in motorboats, they would have fled to the safety of the forest.

This proved to be our most interesting day on the lake. Canoeing was a challenge because of the wind that could skate the shallow-draft boats over the water in every direction but the one



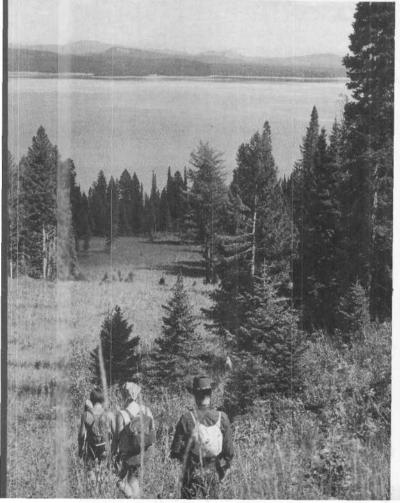
desired. The cloud cover also created an interesting mosaic of light on a forest of pine, fir, aspen and spruce.

We could see rain falling around us at various times, but we were touched by only a few drops. The most spectacular event was watching lightning strike the lake surface to the east of us.

We only had seven or eight miles to cover the second day, so we were in camp by early afternoon. This camp was a place known as Falcon Canyon, a delightful pocket cove with ideal tent sites.

That evening after sunset, we built a warm campfire to ward off the mountain chill. Jim brought a book of poems by Robert Service and the reading of such classics as "The Call of the Wild," "The Spell of the Yukon," and "Men of the High North," brought us all closer to the wilderness we were enjoying.

Our next two days were spent at the most beautiful spot on the trip. The camp was on the shore of Moran Bay, a large finger of water on Jackson Lake's southwest side.



View of Jackson Lake looking east from forest area above our camp at Falcon Canyon.



It might look like it, but A. J. is not hitting Harriett with his paddle. They are just putting in to shore for lunch.

without further exploration, so we set out on foot into an area that looked as if no other man had ever visited.

Following the stream, we were led deep into the forest. This was a moist area, and the ground was a thick pad of spongy moss. In some places, where the sun found its way through the canopy of trees, tiny moss gardens grew with little wildflowers and delicate little plants.

We were seeing a part of Teton National Park that anyone can see if they want to, but most people are content to be carried along through the park in the comfort of their cars.

The last day of our trip on the lake was devoted to crossing the widest part of the lake, heading back toward civilization.

Our last night's camp was on the east side of the lake and we could look back across and watch the Tetons from afar and trace our path along their base. The sunset that night was long and spectacular and we all sat together on a log discussing quietly the week's events. It was a moment of tremendous peace.

The next morning we rowed a short distance to a landing where we were met by a Parklands Expeditions shuttle service. To round out our experience, we were taken a short distance to where the Snake again resumes its flow out of Jackson Lake. Here we were given one large rubber raft, a sumptuous lunch and we shoved off to let the river carry us the last 30 miles of our trip.

The Snake River at this end is a little

more massive and swift, and it was a change of pace to be carried rapidly along in the current, only paddling to keep from striking obstacles.

That afternoon, as we drifted into Moose Junction, snow clouds were forming over the Tetons and an icy rain was beginning to fall. We had made one of the last trips of the season, but the few times it rained and the colder evenings had not dimmed our enjoyment.

Everyone agreed it had been a trip of a lifetime, and the only way to see one of America's most beautiful national parks.

I have had the chance to travel through many of America's wilderness areas by other means, but canoeing has to be one of the most enjoyable.



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What made this such a beautiful camp was the view. We had rounded a range of hills that had blocked our view of the rugged Tetons. Massive Moran Peak was now directly across the bay, and the jagged Tetons fell off behind it. The first rays of sunrise would strike Moran in the morning, and the last rays of sunset would fade behind it each night.

Moran Bay also proved to be a popular area for wildlife, and the first night we had an elk trumpeting in the middle of camp. Deer were constantly walking through camp, and the laughable-looking moose was ever-present.

Since we spent a layover day in Moran Bay, we had a chance to do our own thing. Some of us used the time for picture safaris into the forest, fishing, hiking or just plain relaxing.

Jim and I used some of the time to explore other parts of the bay in our canoe. During that exploration we found a backbay swamp that was fed by an ice-cold stream of crystal-clear water. This discovery was just too much to pass up

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FOLLOWING THE great silver strike at Tonopah, Nevada in 1900, it soon became apparent that a tremendous amount of equipment and supplies would be needed to develop the mines and turn the "mud hut-tent city" into a thriving mining camp. The richness of the enormous ore deposits also seemed to guarantee a stable city would rise in the narrow, 6000-foot pass at the southern end of the San Antonio Mountains. Because the nearest railroad station, on the Carson and Colorado Line, lay 60 miles west at Sodaville, the herculean task of hauling the needed supplies would fall to the freight-wagoneers and their hard-working teams.

The most direct route from the rail-

head was via the Belmont wagon road. From Sodaville, it led down across Kitty Flat, up through Summit Pass in the Monte Cristo Range, across the high country, dropped into a wide basin, then led up a long grade to the new camp. Traversing sand, steep rocky grades, dry lakes—that at times became quagmires—this route was the main thoroughfare through nearly a hundred miles of unsettled desert to the several mining camps in West-Central Nevada.

Despite the numerous obstacles, this route had two redeeming features—it was the shortest, and two good springs lay along its length. Man and beast would be able to rest from the arduous task and be assured of ample water to sustain them during the journey through desert country. Conveniently located almost halfway between Sodaville and the new strike, Crow Springs was destined

to play an important role in the building of Nevada's Queen of the Silver Camps

—Tonopah.

In 1899, Sodaville was home to about 20 families. Its small business district included a general store, boarding house, saloon, butcher shop, railroad depot and two large ore mills. The earlier mining boom in the Candelaria Hills was over, but some mining had continued intermittently. Blessed with mineralized hot and cold running water at their front door, hence the name Sodaville, residents and visitors alike enjoyed a swimming pool and adjoining bath house. Not many railroad towns could boast such pleasant amenities.

When news of the new silver strike reached the outside world, life at Sodaville changed drastically. Newspaper headlines hailing a "strike as big as the Comstock" circulated widely. Almost

Nevada's

Springs Springs

photos by JERRY STRONG

Right: Crow Springs bubbles forth in a grassy meadow cradled in the low, barren hills at the northeastern edge of the Monte Cristo Range. It still produces a good stream of water which is piped to a watering trough at the stage station site. Far Right: A "two-holer" outhouse is in surprisingly good shape except for having been toppled by the wind or, possibly, bottle collectors. 20

by MARY FRANCES STRONG





overnight Godaville became a bustling frontier town. Hundreds of fortune seekers began to arrive daily along with numerous carloads of freight. So frantic was the pace that the town never slept. Businesses operated 24 hours a day. Around the clock, wagon after wagon departed for the new camp. There was almost "horse to horse traffic" along the Belmont Road. Campsites were in constant motion as rested teams departed and weary ones arrived.

Charles A. Humphrey was operating a butcher shop at Sodaville when the new strike was made. His brother Frank and a partner had quickly established the Humphrey-Esner Stage Line between Sodaville and Tonopah. It was their stage, with Frank driving, that distinguished itself by being the first one to arrive in the new camp. Using the Belmont Road and camping overnight at

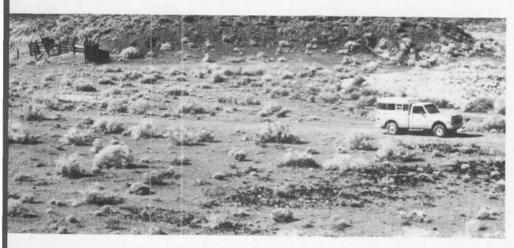
Crow Springs, six passengers made the historic two-day trip, arriving on March 24, 1901.

Brother Charles was also an enterprising young man and he soon concluded there would be great need for a "halfway station" along the Belmont Road now that regular stage runs were in the offing. Crow Springs, with its ample water, central and well-sheltered location, was a ready-made site. The decision made, Charles went into action. A boarding house, homes for the operators, corrals and a large barn were erected along with the "time-honored necessity" of those days—a saloon.

The station was to be a family affair. Charles and his wife Ella, with their two small sons, moved to Crow Springs in 1902. They were accompanied by brother Frank, his wife and two and children and brother-in-law Will Thorne.

Crow Springs became a busy place and often served 200 meals a day. Indian women helped with food preparations and clean-up-all under the supervision of young Ella Humphrey. Italian woodcutters supplied the large amount of wood needed in kitchen ranges. The stage now made the 60-mile trip in 18 hours with Crow Springs the dinner and short rest stop. Though it was an arduous journey (blistering hot and dusty in summer, always freezing and sometimes wet and muddy in winter), stage reservations were booked far in advance. Those in a hurry to reach the new camp had a choice of horseback riding, walking or, if lucky, finding a team and wagon to drive.

The sturdy freight wagons had six-foot wheels and eight to ten animals were required to pull them. It has been estimated that some 2,000 horses and mules



Crumbled ruins
[white area behind 4-wheeler],
an old corral plus piles
of broken glass marking
the saloon site,
are among the remains
of the once-busy stage station.
The darker rocks
in foreground are part
of a virgin field of
large, good-quality obsidianites.







The years have not been kind to the few rock buildings at Crow Springs.
The adobe cement is dissolving and returning to the earth.

were used in the monumental task of hauling supplies to build the new camp. Extra-heavily-laden wagons often stopped at Summit Springs, if their teams seemed tired from the long pull over the pass. Otherwise, Crow Springs was their overnight stop. They carried feed for their animals, partook of the good food at the station; then, after a "few" with the

other freighters at the saloon, crawled under their wagons for a good night's sleep.

The success of Crow Springs Stage Station is clearly stated in *History of Nevada* (Thompson & West), which says, "On the road between Sodaville and Tonopah is an eating station known as Crow Springs, which has become very

caring for the comfort of guests by his estimable wife, mother, father and brothers."

Crow Springs Station closed in 1904 when the Tonopah Railroad was completed. Though it had operated for only two years, tons of freight had passed through. The station had served its purpose well. Hundreds of freighters and travelers would fondly remember this

welcome stopover along the route to the

popular with the traveling public. Here, the weary traveler, after his long journey, sits down to a meal just like his mother used to cook at home and he feels life on the desert is not so bad after all. C. A. Humphrey, a native son of Nevada is the genial host, and he is assisted in

silver camp of Tonopah.

Jerry and I enjoyed a pleasant afternoon with Carroll Humphrey and his attractive wife, Elsie in their charming hillside home above Tonopah. The view was fascinating as we looked down on the town where old mines and dumps mingled randomly with more modern structures. Carroll was only six-years-old when his father moved the family to Crow Springs. He recalled the constant activity and recollected, "My mother kept us (there was a younger brother) pretty close around the house. With so many horses and wagons in the yard, she didn't want us trampled under one."

"Didn't your father own the turquoise mine near Crow Springs?" I asked. Carroll grinned as he replied, "I remember it well because they were always bringing in turquoise stones and giving them away. It wasn't worth a nickel in those days." Carroll went on to comment, "The turquoise was a fine blue color and of good quality. The same type of material is bringing \$100 to \$200 an ounce these days."

Most of the buildings at Crow Springs were moved to Manhattan after it was closed. A large corral and watering trough remain, since cattle still use the range. Immediately north of the corral, a tunnel will be seen in the low hill. This was the "spring house," used to keep meat and food fresh. The main spring



Carroll Humphrey and his wife, Elsie, remember Crow Springs.
Carroll was just 6 years old when the family operated the stage station. He recalls the constant hustle and bustle of freight wagons and stages.

continues to deliver a sizable amount of good water, via a pipeline, to a trough at the site of the former stage station. This is approximately .2 of a mile east of the spring. Stone rubble from several small buildings and the saloon will also be seen. The latter site is easily identified by the large amount of broken glass. Don't get excited bottle collectors. It was ''dug'' long ago!

Crow Springs is cradled among low hills in which a number of smaller springs and seeps occur. It is a pleasant and naturally sheltered camping site that has served as a "resting place" for hundreds of years. Early-day prospectors often camped at the springs during their wanderings in search of gold and silver. Proceeding them, the Shoshone Indian tribes regularly camped and hunted in the area. The number of artifacts which have been collected and the chippings around the main spring indicate long occupancy.

"Hunting arrowheads was a popular pastime in our youth," Elsie Humphrey told us. "We would take a picnic lunch and roam the hills." She showed us some of the fine arrowheads and points from her collection. Later, when we were at Crow Springs, I found part of a broken point, but Jerry found the prize—a small, perfectly-formed bird point.

Another find of interest was also made. After climbing up on a broad terrace behind the old saloon site, we found ourselves in a virgin field of obsidianites. The terrace covered a sizable area and was paved with large specimens, some fist-size, of good quality. They are fine for cutting and polishing, as well as tumbling. Remember, have your back to the sun when collecting or you cannot see them.

We didn't visit the turquoise mine though we passed within a hundred yards of it. The property was covered with signs "Posted"—"Armed Guard" and other more dire warnings of the consequences, should one set foot on the claim. They were so ridiculous and unfriendly, we drove on by. However, we did obtain a few nice specimens!

One day, during our stay in the area, we were looking over a wood location when a man in a pickup drove up and hailed us. He proved to be the armed guard and caretaker of the turquoise mine. "Why didn't you come up and say hello?" Jim Nash asked after introduc-

Crow Springs N E Stage Station Site No Trespassing A D Obsidianite RANGE ENLARGED **CROW SPRINGS** 111111 0 ST(Esmeralda County CRI Millers . TONOPAL 12 mi.

ing himself. "Your signs were so unfriendly we gathered you didn't wish to be disturbed," was our reply. Jim told us the mine owners were currently doing development work along a vein. Their equipment had been subjected to considerable vandalism and he had been hired to look after the property. The signs were to warn trespassers and vandals they wouldn't be treated kindly!

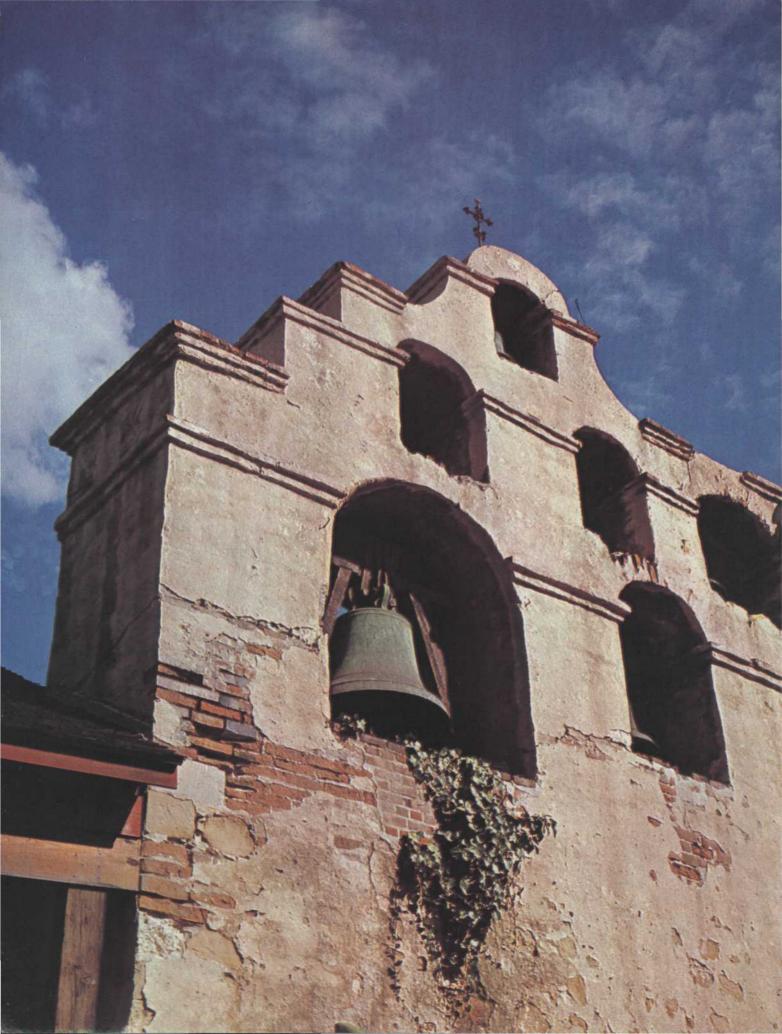
Jim invited us to stop by and see samples of the turquoise and other specimens he had collected in the general area. We did, and when we were ready to leave, he gave us several fine specimens of turquoise.

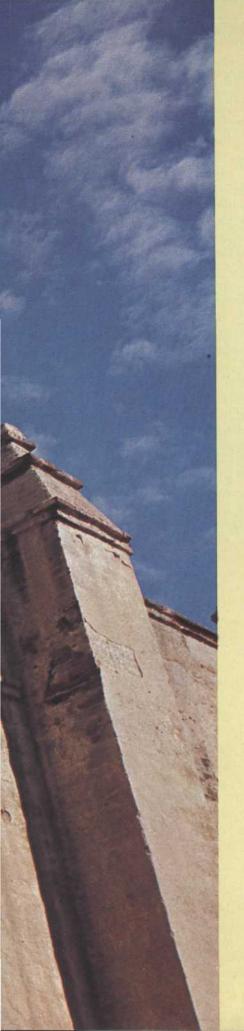
Desert enthusiasts, history buffs and rock collectors will enjoy visiting Crow Springs. Good dirt roads lead to the area and dandy campsites will be found in the vicinity of the stage station ruins. It is still possible to drive the Belmont Road (graded) out of Sodaville. However, the graded road departs from the original route several miles west of Crow Springs. It passes south of the turquoise mine, then, curving around the eastern edge of the Monte Cristos, eventually joins Highway 6 and 95.

Following the original road east from Crow Springs was of more interest to us. Colorful pieces of old broken bottles line the roadsides. It was obvious that freighters carried an amply supply of thirst-quenchers with them. Rusty horseshoes, wagon parts and other miscellaneous items were also observed. The easternmost section of this seldom-used road is in poor condition and four-wheel-drive is advised. Where the road divides for passing, very deep ruts testify to the heavy traffic that used the route.

Returning to the graded Sodaville road, after exploring along the original route, we drove through another sizable field of large, good quality obsidianites. Evidently, "volcanic tears" once rained heavily over this region.

Nevada seems to have more than her share of scenic and historical areas. This former way station is typical of the many lesser-known sites. Though no longer a thriving enterprise, it continues in its age-old role of hosting travelers. Crow Springs offers peaceful relaxation and fascinating recreation for those who find their way into the eastern edge of the Monte Cristo Range.





Although San Gabriel Mission is nearly 75 miles from the desert, and 22 miles from the Pacific Ocean, it served as a destination for early desert explorers, one of whom wanted to visit . . .

The Padres by the Sea

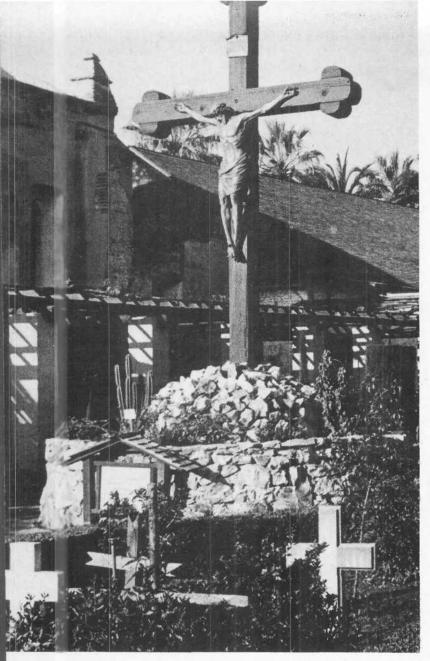
by HOWARD NEAL

A campanario dominates the south wall of the San Gabriel Mission Church. Church architecture patterned after that of the Cathedral of Cordova in Spain, is unusual because of the fortress-like appearance of the high walls, the capped buttresses and the narrow windows.

Desert August 1974

AS THE DECADE of the 1770s approached, events were taking place in North America that would play a meaningful part in shaping the destiny of western man. On the east coast of the continent, the seeds of the American Revolution were being planted. Along the shores of the Pacific, Spain, concerned with possible Russian expansion, was moving to colonize the northern part of its New World domain.

Alta California was the land that Spain now wanted to colonize. It was a task that had seemed overwhelming for nearly two centuries. There was no known land route over the long distance from central Mexico to California. Pacific Ocean travel was, at best, difficult. Yet, within a year from the time he had been



The Mission cemetery, or Campo Santo, surrounds a large cross. More than 6,000 Indians were buried here. Displays at the mission include many early European and Indian paintings and other artifacts. The mission is open to visitors each day of the week except Monday.

given the task, Don Gaspar de Portola arrived at the shores of San Diego Bay. On July 16, 1769, Father Junipero Serra established the first of 21 missions to be founded by the Franciscans along the coast of California.

As recently as 25 years before Portola's arrival, some of the maps that had been published showed California as an island. Even in the early 1770s, although maps now agreed that California was firmly attached to the North American land mass, the area to the east of the coastal mountains was shown as a vast wasteland. Thus, as the padres established their missions, they stayed on the coastline, as at Monterey in 1770, or in the nearby coastal valleys, as at San Antonio and San Gabriel in 1771.

Mission San Gabriel Arcangel was

founded on September 8, 1771. It was the fourth mission in Alta California. Father Angel Somera and Father Pedro Cambon located the mission in a broad valley some 100 miles north of San Diego. By chance, the spot selected was the most convenient to the desert lands to the east.

By the close of 1772, five missions had been established between San Diego and Monterey. In spite of the fact that the great California deserts between the coastal missions and the settlements in Sonora were, as yet, unexplored, an overland supply route from central Mexico had become imperative. The ocean routes were still difficult and unreliable. Without a land route, colonization was impossible. The poorly protected, and poorly supplied missions might perish.

Within just a few years, two such land routes were found. The Spanish path-finders were Father Francisco Garces and Captain Juan Bautista Anza. For each explorer the destination was Mission San Gabriel Arcangel.

Francisco Garces seemed to have been born to be an explorer. He arrived in the Spanish New World in 1768, at the age of 30. He was assigned to Mission San Xavier del Bac, in what is now southern Arizona. Within two months of his arrival, he had ventured forth into the desert on explorations as far as the Gila River. During the next few years, he made several trips into the desert seeking Indian converts to Christianity. Each journey was longer than the one that preceded it.

In 1771, the year San Gabriel Mission was founded, he followed the trail of another explorer, Father Eusebio Francisco Kino, south from San Xavier del Bac, then west across the long waterless stretch of desert known as the Devil's Highway to the junction of the Gila and Colorado rivers. From there, he continued west through the desert until he saw the San Jacinto Mountains. Two mountain passes could clearly be seen. Father Garces was certain that the ocean was just beyond that range.

But, reaching the ocean was not Garces' goal. His mission was the conversion of Indians, and he had found fertile ground in the villages of the Yuma Indians along the Colorado and Gilarivers.

By 1773, the pressure for a land route to California had reached a peak. The man who most deeply felt he could find such a route was Juan Bautista Anza, captain of the presidio at Tubac. His deep feelings were based, in part, on the fact that he, his father, and his grandfather had all served Spain in Sonora and all had believed in Father Kino's old dream that a land route could be found from Sonora to that beautiful bay at Monterey that had been discovered by Sebastian Vizcaino in 1602. His hopes were also buoyed by his conversations with Father Garces. He, too, believed that the ocean was just beyond the mountain passes that Garces had seen.

With mixed emotions, Anza, Garces and 34 men followed the royal flag of Spain south, into the desert, from Tubac, on January 8, 1774. Hope that they could reach the California missions overcame their fear of the desert, and of the Apa-

che Indians. Even before they had left Tubac, 130 of their horses had been stolen in an Indian raid.

Following the route that Garces had taken in 1771, their first objective was Caborca, approximately 150 miles southwest of Tubac. They hoped to be able to replace some of their horses there. But, luck was not with them. Apache raids had depleted the number of available animals to a few skinny mules.

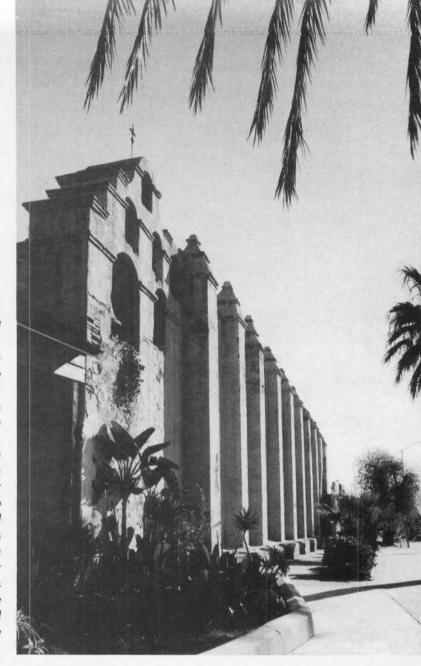
From Caborca, the explorers headed northwest to the Sonoita River and on through stark desert desolation to the Yuma Indian villages at the confluence of the Colorado and Gila rivers. There, helped by Indians befriended by Garces on earlier visits, the party forded the Colorado River. Again, the group headed toward the southwest, through the great sand dunes of the southern Colorado Desert. Here, the most difficult part of the journey was encountered. Garces could not remember any landmarks. Indian guides could not help. The group wandered around in the dunes for nearly a week. Finally, after a rest of two weeks and another try, the party made it through the sand. It had been two months since departure from Tubac, and nearly 600 miles of desert had been covered when Anza, Garces and their men moved north into the Borrego Valley. The worst was over. Now, as they gained altitude moving toward the mountains, their enthusiasm was returning. Garces' mountain passes could be seen.

Because of snow, it took three days for the explorers to cross the San Jacinto Mountains through San Carlos Pass. But, the cool mountain air was a refreshing change from the heat and thirst of the desert. With the mountains breached, the party moved into the coastal valleys. Through the Hemet Valley the group progressed, past the site of present-day Riverside, and on to Mission San Gabriel.

Anza and Garces knocked on the gates of San Gabriel at sunset on March 22, 1774. The journey had taken nearly three months, but the desert had been conquered. A land route from Sonora to the California missions had been discovered.

In March of 1774, Mission San Gabriel Arcangel was located at a place now known as La Mission Vieja, its original site. The crude structures that had been built were made of saplings and mud. There had been fear of Indian attacks

Mission San Gabriel Arcangel. founded in 1771, was the fourth of 21 missions established in California. Captain Iuan Bautista Anza and Father Francisco Garces used the mission as a destination following their explorations of the Colorado and Mohave Deserts.



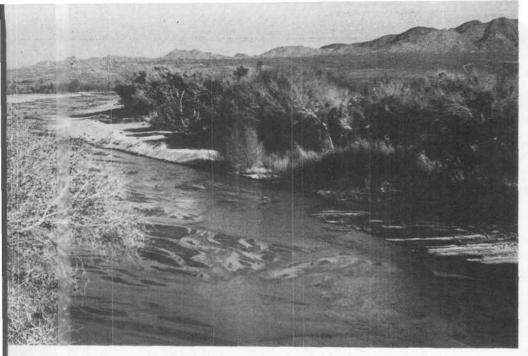
during the two and a half years since founding, so the padres had built a wooden stockade around the small church and other buildings. Mission life in California had been very difficult. The padres were surprised, and pleased, to ring the mission bells for the desert pathfinders. A new route of supply from Mexico could only be a blessing.

Following a short rest at San Gabriel, Anza pushed on to Monterey. Garces, having served his purpose as a guide across the desert, returned, with most of the soldiers, to the Indian villages on the Colorado River and, in due course, made his way back to San Xavier del Bac.

Anza was a hero. Kino's great dream of a road from the missions of Sonora to the bay at Monterey had been realized. At Monterey, Anza was promoted to the

rank of Lieutenant Colonel and ordered to return to Tubac to recruit colonists for California. He did so, eager to make the journey again.

On October 23, 1775, Anza and Garces again started the long expedition. Moving north this time, in order to avoid the terrors of the Devil's Highway, a group of nearly 200 colonists and 40 soldiers followed the Gila River to the Colorado. Crossing the sand dunes of the Colorado Desert was easier this time, and all except one woman, who lost her life in childbirth, reached Mission San Gabriel. But, when Anza reached the mission on this second desert crossing, Father Garces was not with him. Garces, and another priest, had been left behind at the Colorado River so they could make plans and select a site for another mission.



The Mojave River was discovered by Father Francisco Garces on March 9, 1776. He followed the river from Afton Canyon to its headwaters in the San Bernardino Mountains, crossing the Mojave Desert to seek a short route to San Gabriel.

Father Garces, explorer that he was, was not content to stay in the villages of the Yuma Indians. First, he went south along the Colorado until he reached the mouth of the river. Then, on February 14, 1776, he headed north along the river to the land of the Mojave Indians. There, he was told that the northern desert could be crossed to reach the ocean. The Indians had sea shells to prove the truth of their story. He was also told, by the

Indians, that they had seen white men at the mission near the sea. Father Garces decided he might be able to find a shorter route to the missions. Besides, Anza had difficulty getting his group of more than 200 men, women and children across the Colorado River, and parts of the route followed were terrifying. Perhaps, thought Garces, a northern route would be easier.

Thus, on March 4, 1776, a group of

The Hugo Reid Adobe, built in 1839, is representative of early adobe ranch homes in the San Gabriel Valley. In 1846, Governor Pio Pico granted Reid a large portion of San Gabriel Mission property. The Reid adobe is located at the Arcadia Arboretum.



five men, four Indians and Father Francisco Garces left the Colorado River at a spot near the site of Needles, California for another desert journey. Father Garces told his companions that he wanted to visit "the padres by the sea."

Garces kept a diary, but he did not record much. He was a man of few words, at least few written words. The desert can be beautiful in March. If that beauty was there in 1776, Father Garces did not say so. He mentioned grass, he mentioned water, he mentioned Indians he would have liked to convert, but little else was recorded.

In spite of the scanty notes kept by Garces, historians have pieced together his route with some certainty.

After leaving the Colorado River, the group moved almost due west, through the Providence Mountains, and on to the site of Marl Springs. From there, Garces, and his followers, continued west until, on March 9, they arrived at an "arroyo of saltish water" which Garces named Arroyo de los Martires. The Mojave River had been discovered.

Did Garces think he had found a section of the Colorado River? Perhaps he did. What is now the Colorado River had been named the "Arroyo de los Martires" by Father Kino more than 75 years before. Some early maps show the Mojave flowing into the Colorado, just as others show it flowing into the Pacific Ocean. After all, a river that just disappears into the earth is a bit unusual. In any event, Father Garces' use of the words used by Father Kino caused confusion among map makers, and others, for many years.

Since he was much more interested in a new, short, route to the California missions than he was in discovery, Garces, and his group, quickly moved on. He first saw the river at what is now Afton Canyon and, from that point on, the river and Indian foot paths became the route of travel. From Afton Canyon, the five men moved south along the river past the sites of today's communities of Yermo, Barstow, Victorville and Hesperia. In less than two weeks, the group was past the real desolation of the Mojave Desert and was moving toward the San Bernardino Mountains.

Apparently Garces crossed the mountain range east of Cajon Pass. High into the mountains the group went, to the headwaters of the Mojave River. Then,

on they went, over the top, and down into a broad valley. Again, Garces turned west toward the setting sun. Just a few more days, and over a few more hills, and the little group arrived at the newly-relocated site—the present site—of Mission San Gabriel Arcangel.

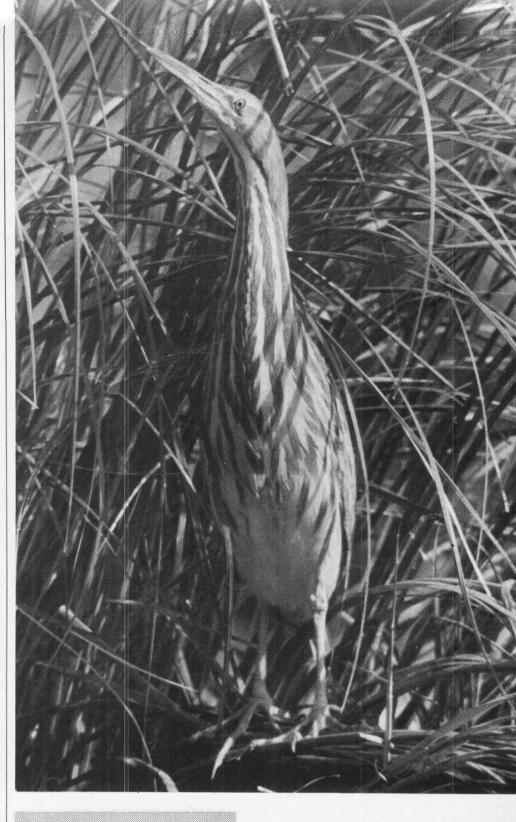
Father Garces thought of the priests at San Gabriel Mission as the "padres by the sea." The mission, today, is known as the "Queen of the Missions." It could have just as easily become known as the "desert mission," or home of the "padres by the desert" because of its relative proximity to both the Colorado and Mojave deserts. Yet, in spite of the fact that it was the church home for many desert Indians, and was the primary destination for both Anza and Garces, the padres at San Gabriel rarely ventured beyond the mountains.

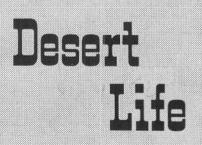
When Father Garces arrived in the San Gabriel Valley for his second visit, the mission had been in operation for nearly five years. In 1775, it had been decided that the location of the mission should be moved to a more fertile area. Thus, it was relocated, five miles to the northwest of its original site, and rebuilt in the center of the valley where it stands today. Father Garces was among the first to be welcomed to the new location.

Garces had probably found an easier path to the California missions, yet no other Spaniard was to use it. It would be 33 years before a padre from San Gabriel would visit the Mojave, and the next man to cross the forbidding desert from the east would be an American. Jedediah Smith would cross the Mojave in the year 1826, 50 years after the Garces journey.

The first padre to return to the Mojave, following Father Garces, was Father Jose Zalvidea, who reached the area near the narrows of the Mojave River in 1809. Another expedition reached nearly to the present site of Barstow in 1816. Perhaps the most extended journey into the desert from San Gabriel took place in November and December of 1819. A small force of soldiers was led by Lieutenant Gabriel Moraga. Father Joaquin Nuez was chaplain. In a 22-day period, the soldiers and Father Nuez crossed the mountains at Cajon Pass and, in search of marauding Indians, traveled far into the Mojave Desert. Father Nuez wrote a thorough description of the journey. He

Continued on Page 41





by DR. HANS BAERWALD

Given a small body of water, the right vegetation for shelter, and a natural food supply, all kinds of wildlife will congregate even in the desert. This American Bittern, in typical pose, made its home at the 'water gardens' of the Mission Lakes development near Desert Hot Springs, California. It feeds mostly on bluegills.

THE TRAP-DOOR

SPIDER

THREE HUNDRED MILLION years ago, when the sea creatures first began to leave the water in favor of a life on dry land, the spiders and their relatives were among the first to make the transition. Since that time, they have spread to nearly every corner of the earth, and have developed such a wide range of habits and features that the study of spiders, Arachnology, is an entire science in itself.

Despite their widespread distribution, however, very little is known about many species of spiders, for all spiders live solitary lives usually well hidden from the prying eyes of both man and beast.

One of the most clever of these creatures is the trap-door spider, common to the southwest United States. These particular spiders are so adept at secretive camouflage that most people seldom, if ever, have a chance to see one. This is due to the fact that trap-door spiders live in burrows in the ground which are capped with a well-concealed door.

In the United States, there are several different types of trap-door spiders, but Bothriocyrtum Californicum of the

southwest is without a doubt the most ingenious. While some trap-door spiders build their doors as simple silk flaps which fit loosely over the entrance of the tunnel, *Bothriocyrtum Californicum* builds a door engineered so that it fits into the top of the burrow with amazing precision. Once closed, it is nearly invisible. It serves well both to camouflage the spider's home and to keep out intruders.

The door itself is made of several layers of silk and dirt, and is usually about an eighth-of-an-inch thick. It is hinged on one side so that it can be opened and closed with ease.

The burrows range in diameter up to about an inch, and usually extend into the ground about six to eight inches. The spiders themselves can grow to about an inch-and-a-quarter to an inch-and-one-half across. They often appear much larger because, like the tarantulas to which they are related, they are very bulky with a large abdomen and thick, strong legs.

They dig the burrows with their powerful chelicerae (fangs) which have stiff comb-like spines along their edges. With their chelicerae, the trap-door spiders are able to scrape and rake at the earth. During the excavation, they mold the earth into balls, carry it to the surface and distribute it some distance from the tunnel opening.

The walls of their tunnels are waterproofed with a coating of saliva and earth. The saliva coating, which tends to cement the walls of the tunnel, is so strong that when the tunnel is dug up and removed from the surrounding earth, it actually holds together in one piece. The inner walls of the tunnel are also sheathed with silk, and trap-door



The trap door, in its closed position, is cleverly camouflaged and extremely difficult to open.

by TIMOTHY BRANNING

spiders exhibit some of the finest examples of silk spinning in North America. In the event that the spider outgrows his domicile, he can simply enlarge it by digging away at the sides. They seldom leave their burrows and usually spend their entire lives within the confines of one abode.

Living alone, they are nocturnal animals. They hunt by hiding under their doors and waiting for some hapless insect to pass close enough to grab. Trapdoor spiders usually do not leave their homes although it has been reported that they sometimes wander about on the surface after heavy rains have saturated the soil.

The burrows themselves provide the spiders with an ideal home. They are well-concealed and provide the habitant with year-round protection from the elements. This is especially important since, unlike many of their relatives, trap-door spiders live more than one year. They have been known to live in captivity for up to about eight years and, because of their longevity, need homes that can withstand seasonal changes. The tunnel does this guite well, for during the day it shields the occupant from the sun and provides a cool resting place. During the night, and when cooler weather arrives, the deeper recesses of the tunnel also serve to insulate the spider and keep him warm.

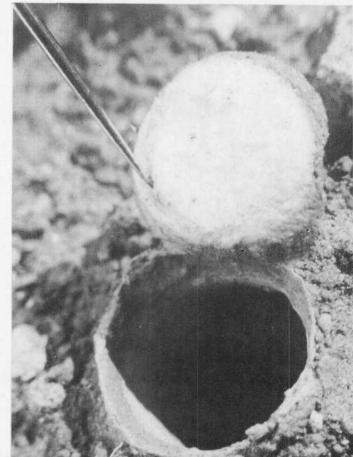
During the mating season, the burrow also serves as a mating chamber. It is likewise used as a receptacle for the eggs and for a nursery. The young spiders usually stay with the mother for several weeks, emerging when they are large enough to dig their own homes and fend for themselves.

The burrows additionally serve as a defense mechanism for from within, the spider can hold the trap-door shut with amazing strength. Bracing his legs against the tunnel walls, the spider can hold the door tightly enough so that a man must exert considerable force to open it. A knife blade or heavy needle is necessary to pry the door open.

Despite this, trap-door spiders do have one adversary who is able to invade this seemingly impregnable bastion. This is *Pompilidae*, better known as the "spider wasp" or "spider hawk." Diligently scouring the earth, these "spider

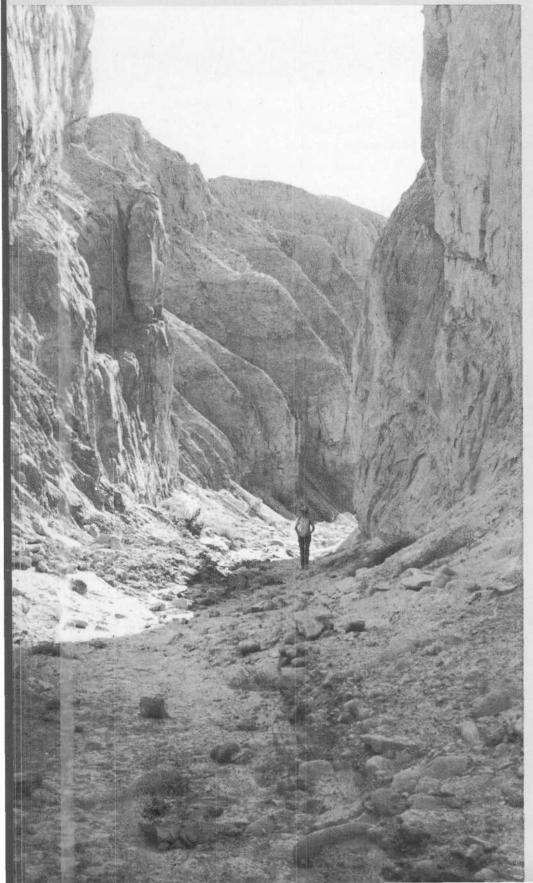
hawks" are ferocious hunters, able to open up or chew through even the most tenaciously guarded doors. Once through, the battle that ensues within the recesses of the tunnel is often one-sided. Armed with highly-specialized sensory devices and a deadly paralyzing sting, the wasp makes short work of the spider. Once paralyzed, death is certain, and the spider's carcass becomes the host of a single egg which soon hatches into a larva that gluttonously devours the entire body and emerges as a fully-developed young wasp.

Except for Pompilidae, however, trapdoor spiders are relatively safe from most other predators. Many animals simply never see them, while those that do often find it impossible to get past the tightly closed doors. For humans, it takes a special effort to spot a trap-door, even though they are quite common in many gardens. These creatures tend to prefer warm, open, sunny hillsides, as a rule, and congregate in numbers. They are a delight to observe, and can provide a valuable educational experience for any child or adult. They are also very beneficial, since they eat many harmful insects, and therefore, like all creatures, should be protected from harm or harrassment.



Pried open with a needle, the door exposes its silky undercoating and saliva-packed tubular tunnel entrance.

SUMMER DES



by MARVIN PATCHEN

HIKING IN THE DESERT in the summer... you've got to be kidding. This is the normal response my wife and 1 get when we announce that we're off on our weekend habit of exploring the desert on foot.

We're neither mad dogs nor Englishmen and our temperature tolerance is probably about average. We hike for recreation and to help cure our insatiable desire to know what's over the next rise or around the bend, not to demonstrate our physical prowess. To be able to enjoy the desert all year round, we've established techniques to keep us healthy and happy that we'll pass along so you also might discover the beauty of summer in the desert.

Important is altitude. In the direct sun, the low desert, below 1,000 feet elevation, is often intolerable after ten o'clock in the morning. Ideally, trips should be planned where the elevations are about 2,000 feet. The higher the cooler. As a rule, the desert close to the



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HIMING

Opposite Page: This remote side canyon off of Arroyo Seco Del Diablo is comfortable hiking in the morning. From noon and beyond, the canyon walls radiate too much heat. Right: My wife, Letha inspects one of the unusual side canyons in the Badlands [I call them "good lands"] between Arroyo Tapiado and Arroyo Seco Del Diablo. Below: The Pinon Mountain area in the southern Anza-Borrego Park is ideal for summer hiking with elevations up to 5000 feet.

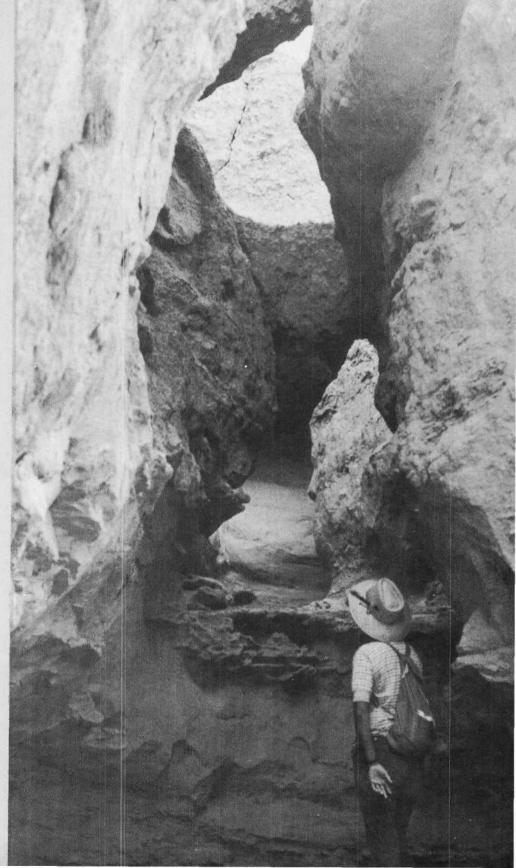
coastal mountains such as California's Anza-Borrego State Park will be cooler compared to a like elevation in the eastern desert. Although camping on the low desert at night is fine, head for the high desert for your walks.

Usually the summer temperatures at the higher altitudes range from 95 to 105 degrees, and most always will be more comfortable than lower city temperatures because of the dry air and lack of smog. We have discovered that 100 degrees in the desert is more comfortable than 85 degrees in the city.

A consideration that may rule out summer hiking for late sleepers is that you should get an early start-a dawn start is perfect. Plan your trip for a maximum of five hours so you will be back in



Desert August 1974





Author's wife pauses during a desert hike to examine formations in a desert canyon.

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camp or your starting point by noon. Two- to five-hour, half-day hikes are ideal so you don't weigh yourself down carrying a lot of water or spoil the trip by becoming too hot and fatigued. Hiking in the mid-afternoon is uncomfortable because by this time the desert floor has absorbed too much heat. At dusk, the temperatures are much warmer compared to dawn as the earth retains the day's heat.

Although hiking across the flat open desert is great in some seasons, it's not comfortable in the summer because of the lack of shade—an important commodity during rest stops. One should also try to avoid traveling across light-colored sandy areas as the sun reflecting off the surface can run temperatures as much as ten degrees higher compared to darker terrain. Canyon hiking is ideal as there is usually shade to rest in.

Water is the most important factor in planning your hike. Each person has a different requirement and until you know your needs, carry an over-supply. I normally carry two quarts for a half-day hike, consuming one quart on the outbound leg and one on the return trip. It is a wise practice, even if you haven't reached your planned destination, to head back when you have consumed half of your water. We usually have an ice chest in our Jeep filled with cool fruit juices for a return treat, and lighter shoes to replace our hiking boots. Don't over imbibe the night before your hike. Alcohol promotes dehydration and you'll find yourself drinking all your water the first hour of your jaunt if you have partied too much.

Next to water, the most important items are a wide-brimmed hat and good hiking boots. Affix a cord to your hat with a slip knot around your chin so it stays put if a sudden gust of wind tries to send it into orbit. My wife will never forget the time she was looking down into a deep canyon when the wind blew her hat off and it landed in an inaccessible spot on the canyon floor. Although we shared my hat on the long remainder of the hike, it was obvious to us how important our hats were in lowering our head temperatures.

Even though hiking boots and heavy socks are hot, they are far better to wear than light shoes that punish the bottom of your feet on rocks and allow ground heat to penetrate the soles of your feet. As far as whatever else you wear, it's pretty much up to you and your complexion-light-colored, loose-fitting clothes are best.

Besides water, I carry a rucksack containing a lightweight 35mm camera, small monocular, mini first aid kit, tweezers to remove cactus thorns, some hard candies, matches, a light lunch, toilet paper, salt tablets, a compass, a tiny flashlight and finally, a snake bite

Summertime is rattler time. This past summer we encountered nine rattlers. Five wiggled their tails as a warning and the others appeared to be asleep. Inadvertently, I stepped over two of them without knowing it until my wife asked me to look at what I had walked over. As a rule, in the early part of the morning, the snakes are not wide awake and either asleep or too cool and groggy to move. In the summer, we avoid tromping through the brush or putting our hands or feet on rocks or ledges that are hidden from view.

Important, especially in the summer, is not getting lost. My normal hiking companions are my wife, Letha and our friend, Jean Leetch, wife of an Anza-Borrego State Park Ranger, George Leetch. Someone has to be a navigator. In my case while the two gals are looking for petroglyphs, fossils and unusual plants or sheep, I'm keeping an eye out for landmarks that will guide us back to our Jeep. A good idea is to study the landmarks behind you for a visual clue to guide you back to your vehicle. Taking an occasional compass reading is also helpful.

In some places, thunderstorms are a consideration. Even though it's raining several miles away, the runoff can catch up to you and a dry wash can suddenly become a raging torrent.

Backpacking in the desert appeals to only a few. You must either have the ability to carry a heck of a lot of water, or route yourself to pass by a reliable water source or cache water ahead of time on your intended trail. In the summer, I recommend that backpackers, as opposed to day hikers, take a long afternoon siesta in the shade before continuing their walk. If you plan it right, one can often take a spectacularly beautiful hike when the moon is full as long as you're not in cholla cactus country. Summer nights on the desert are magnificent. We generally

Desert/August 1974

do not bother with a sleeping bag and just sleep on top of a foam rubber mat-

If you want to pamper yourself after a morning hike, you can check into a desert motel and enjoy the pleasure of their pool. In fact, you can, for example, take a Saturday morning hike, check into a motel in the afternoon, get up early the next day for another morning hike and be back in time for another swim before checkout time-all on a single day's

It's wise to always let someone know where your're planning to travel during any season when going into the back country. If you're checking in with a ranger, be certain to let him know that you have concluded your trip so a needless search will not be initiated.

Uniquely, we use three major modes for travel in the desert. An airplane, four-wheel-drive vehicle and our boots. The airplane gives us a three-dimensional topographical map of the desert. We get the big picture and have discovered, contrary to what is said, the desert is not being destroyed or overrun by man.

Primarily, our Jeep is used to get us to the starting points of our hikes. Very few desert walks begin where you can park on a maintained road; consequently, a pickup truck or something other than a low-slung passenger car allows you to get to the beginning of your trail.

Hiking adds an intimate dimension. We rarely choose well-traveled routes. Because we select the out-of-the-way, remote areas for our walks, we have enjoyed many unusual vistas and have come across unique Indian sites, caves and formations that have been exciting discoveries.

You will find temperatures in the summer will vary from comfortable to "a good day to sit in the shade" but, because the desert covers so many millions of acres, we do not let the calendar inhibit our guest to explore as much of it as our lifetime will permit.

By choosing the higher elevations, carrying plenty of water and not overdoing it, you can also discover, as many who live in the desert have, that the summer is really the nicest time of the vear.

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Above: The Joint Trail was named after the narrow crevices or 'joints' through which it passes. Some of these are only inches wide. Right: Hiking the Joint Trail is a shadowed adventure spotlighted now and then by beams of sunlight. Far Right: Occasionally, the Joint Trail enters an open area, then the walls close in again.

JONT TRAIL

THE JOINT TRAIL, in the Needles district of Canyonlands National Park, is a foot trail well worth taking even if it went nowhere. But add to the eerie charm of the Joint Trail the wild beauty of the jeep trail that leads to it, and a goal as wondrous and lovely as Chesler Park, and the result is a unique combination that should not be missed by visitors to south eastern Utah.

The Needles district of Canyonlands National Park is a geologic complex beyond compare. Colorful eroded canyons, deep gorges, broad meadows, standing walls and towers of red and white sandstone and the appalling chasm of the mighty Colorado River are all blended into a vast and spectacular scene by the consummate artistry of nature.

One of the most beautiful of these diverse features is Chesler Park. Visualize a gently sloping meadow carpeted with amber-topped wild grasses and studded here and there with age-gnarled juniper trees and outcroppings of weatherrounded rock. Add to this pastoral setting countless soaring walls and towers and minarets and needle-tipped spires and rounded domes, all carved over eons of time from vividly colorful red and white sandstone. Place over this unearthly Eden-like scenery a canopy of deep blue relieved only by a scattering of fleecy clouds and you have-Chesler Park.

At one time, one of the jeep trails that penetrate the Needles district of Canyon-lands National Park entered Chesler Park and crossed its lovely meadows, but now the vehicle trail is closed, the beauty of the meadows is largely restored and the only access to Chesler Park is by several foot trails.

By far the most entrancing of these is the Joint Trail. The head of this strange foot path is in remote Chesler Canyon. To reach this canyon it is necessary to travel by off-road vehicle from the

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The first half-mile or so of the Joint Trail offers scenic beauty typical of the area—a deep canyon with drywash bottom, vegetated sand dunes and towertipped sandstone walls. As the trail climbs onto higher terraces, the vista broadens and a veritable fantasyland of slender sandstone "needles" comes into view, the needles that gave the area its name.

The rocky terraces which the trail ascends are landscaped with desert shrubs, pinion and juniper trees and sand dunes bound motionless by tough grasses, perennial wildflowers and the microscopic plantlife colonies known as "brown sugar soil." The soaring, rounded domes and fins of rock through which the trail wends are red and white Cedar Mesa sandstone, made still more chromatic by a patina of desert varnish and patches of colorful lichens and mosses.

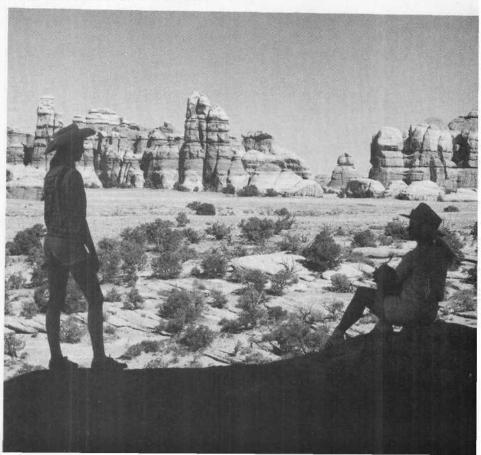
The trail continues up a narrowing gorge that is shaded by looming walls and trees grown taller in the sheltered grottoes that are everywhere. It next climbs a series of stone steps, then enters a place of eerie, echoing charm, a long cavern roofed by overhanging walls of rock and boulders the size of apartment buildings. This gigantic, cool grotto is floored with sand and studded with immense slabs of fallen rock, and offers a welcome respite from the warm desert sun.

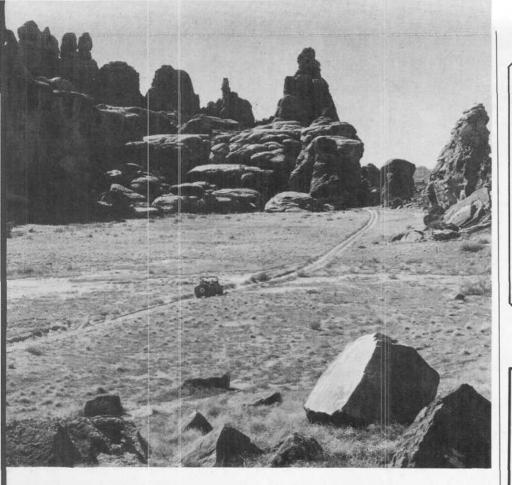
At the far end of this huge cave, a vast picture window, framed by soaring arches of rock, offers a view into a fairyland canyon of monstrous mushroom shapes, stony ledges and narrow watercarved passages. A fallen boulder the size of a three-story home decorates the lower part of this enchanting vista.

Next comes that part of the trail that gave it its strange name.

At some time in the primordial past, the immense rock masses that presently wall Chesler Park were cracked and forced slightly apart by tremendous and irresistible subterranean forces. After eons of time, these cracks were exposed, and water erosion removed enough rubble to create narrow, open fissures floored with

Eden-like Chesler Park is the reason for the Joint Trail, although the trail would be worth taking even if it went nowhere.





The vehicle trail to the head of the Joint Trail passes through highly scenic country.

hardpacked sand and some remaining rock.

By chance, several of these ruler-straight, sheer-walled cracks, or "joints," were aligned and connected enough to form passageways for wild animals, then Indians and finally modern man. In recent years, Park Service trail builders have surmounted the worst of the rubble piles with stone or wooden steps, and have made it easy to go from the level of one fissure bottom to the next, which may be higher or lower.

For the next quarter-mile or so, Joint Trail hikers can easily imagine how an insect feels crawling along the bottom of a crack in a wooden floor. The smooth, straight walls of the trail reach incredible heights, often leaving only a thin ribbon of sky showing high above. The fissure may be five feet wide or three, or even less in places. Still narrower cracks branch off in many places, challenging children and slender adults to see how far they can penetrate before wedging fast.

A few of these tributary cracks lead to distant exits, but children should return to the main trail to avoid the risk of getting lost in the surrounding maze.

In some places, the walls of the Joint Trail are so close together that it is possible to inch up from the fissure floor by "chimney crawling." This is great fun for children, but should not be pursued to dangerous heights.

All too soon, the strange beauty of the Joint Trail ends, as a final flight of steps leads upward into the sunlight. The trail continues a short distance up onto an ascending series of sandstone ledges, and finally ends at a viewpoint overlooking lovely Chesler Park.

Near this viewpoint, the foot trail branches. One fork leads on to gigantic Druid Arch. Others head back toward the campgrounds at Squaw Flat and the Devil's Kitchen, or farther into the complex rock labyrinth of the Needles. These longer trails should not be casually attempted, however, without adequate food, water, time and a good map. Even experienced hikers have gotten lost in this sandstone wilderness.

But the startling and eerie beauty of the Joint Trail is within the capability of almost anyone, and offers an intimate look at Chesler Park, a remote and lovely Eden that is unique even within a land of outstanding beauty.



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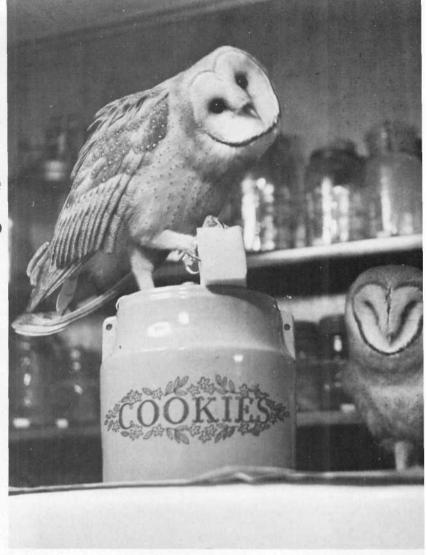


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The models for our photo are two little barn owls that are being raised by our Field Trip Editor, Mary Frances Strong and her husband, Jerry. The birds were confiscated from nest robbers by the Department of Fish and Game and turned over to the Strongs for rearing. Pictured here, at the age of nine weeks, Topper (left) and Squeaky are due to be released into the wilds sometime in August.

PADRES BY THE SEA

Continued from Page 29

found the desert cold, desolate and generally uninviting. His words certainly did not encourage early settlement of the land beyond the mountains.

In 1776, when Father Garces visited the new site of the mission, the padres and their Indian helpers were starting to erect adobe structures. The first buildings to be completed were the chapel, priests' quarters and rooms for soldiers. By the time of the next visit to the Mojave, by Father Zalvidea in 1809, the church edifice that we see today at the mission had been completed.

The architect was Father Antonio Cruzado, who was at San Gabriel from 1772 until his death in 1804.

The architecture of the church at San Gabriel Mission is unusual when compared with the design of other California mission churches. The high walls, narrow windows and capped buttresses were patterned after those at the Cathedral of Cordova, near Alcarazegos, Spain, where Father Cruzado was raised. And, the church has no bell tower. It was destroyed in an earthquake, in 1812, and was replaced with a very artistic campanario. The damage to the church wall; where the bell tower fell away, can still be seen.

Today, a visitor at Mission San Gabriel Arcangel first steps into a peaceful garden where, against the ancient walls of the church, the graves of the early padres give mute testimony to the more than 200 years of mission history.

Throughout the mission, there is evidence of San Gabriel's busier days. In the campanario are the heavy bells that, at one time, called the Indians to Mass. The old winery, once the largest in California, still stands with its press, barrels and slanted floor where Indians once trod, barefoot, upon the grapes letting the juice flow into a trough for collection and fermentation. There are the remains of the old soap and candle factory which supplied the needs of many of the other missions. The tannery vats are a reminder of the days when all the needs were met within mission walls

Of particular interest to the visitor is one of the finest displays of mission artifacts in California. Included are many paintings representing some of the oldest examples of Indian work. The colors for the paints were obtained from wildflowers and mixed with olive oil. The Indian paintings seem to have survived the years better than some of the European works brought to New Spain by the padres.

There seems to have been something about Sonora that brought out the exploring instincts in man. Father Kino, and other lesuits, explored much of what is today southern Arizona and northern Mexico. Three generations of Anzas moved out from Tubac to see what was beyond the next hill, mountain or desert. Francisco Garces crossed the Colorado Desert with Anza, found a new route to the missions through the Moiave, and went on to become the first European to visit the San Joaquin Valley.

It is easy to understand why the early padres at Mission San Gabriel Arcangel did not share the fervor for exploration felt by their brothers in Sonora. Even today, the cool mission gardens induce one to escape the hassle of outside life. One can forget the busy automobiles, just beyond the mission walls, and dream a little of the life in early California. Certainly, there is much evidence of work and hardship. But, there is also guiet, beauty and splendor.

It is little wonder that, in those years gone by, so few ventured forth to face the difficulties of a long journey to the then desolate deserts of California.

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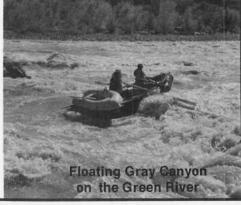


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Rambling Rocks

by Glenn and Martha Vargas

Fluorite: No. 4 in Hardness

VERY FEW PEOPLE know of the mineral fluorite, but surprisingly, it is common, and of importance economically. It is found in many mines, usually in the heavy metal veins, and also found in immense deposits, with little or no metallic minerals.

The name fluorite is very old, and carries some interesting side issues. It stems from the Latin word fluor-to flow, alluding to its very liquid nature when heated to about 2500 degrees Fahrenheit. This flowing characteristic will be discussed in a later paragraph.

Fluorite, chemically, is calcium fluoride (CaF2); a union of the semi-metal calcium and the gas fluorine. The gas was named from the mineral.

Some minerals, fluorite among them, will show a different color when exposed to ultra-violet light. The term for this different color phenomenon is known as fluorescence, and stems from this mineral. It is surprising, however, that there are far better examples of fluorescent minerals than fluorite.

The behavior of fluorescence was probably first noted in this mineral as it was taken out of the mines. The miner's lamp of early days was either a candle or a pitch torch, which is very red or yellow. When the mineral was subsequently viewed in sunlight, which contains a high amount of ultra-violet, there was a marked change in color. This type of color change can be especially noticeable in transparent minerals, which fluorite commonly is. Thus, the mineral of lesser fluorescence was easier noticed rather than that of an opaque mineral with a better possible display.

Fluorite is found in almost every color and color hue. The most common are blue, green and purple, but yellow, pink,

also. A pure red is unknown. Often, two or more of these colors may be present in bands in a single chunk.

The color of fluorite fades easily in sunlight, with nearly colorless being the end result. It is an interesting experience searching for fluorite specimens at old abandoned mines. One mine that we know of has deep purple crystals far underground. Specimens on the walls near the opening are green. The upper surface of the mine dump is covered with almost colorless pieces. A small amount of digging will expose pink pieces. As one digs deeper, the color will be a nearorange. At the deeper levels, green will be found, and finally purple.

Fluorite forms crystals in the isometric (cubic) system, and the cube is the most common form. Crystals in a double pyramid form (the octahedron) are found on rare occasions. The unique feature about the cubes is that they are usually twins. If one can imagine a line drawn from opposite corners, through a cube, and then inserting a second cube within the first, with both aligned to this same line, but the second cube rotated along the line, we have a figure which now shows all of the corners of each cube, as in the illustration.

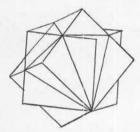
Fluorite has a distinct cleavage (a tendency to split) in four directions. When a piece is carefully cleaved, an octahedron can be produced. Often, in regions where fluorite is common, these doublepyramid cleavages are sold as fluorite "crystals." Because of breakage during handling, and the twinning characteristic, it is difficult to recover many complete fluorite cubes, but most imperfect specimens can easily be cleaved into the octahedral form, and thus sold.

The miner watches carefully for fluorite. He calls it fluor or fluorspar, and usually classes it in a group of other minerals known as gangue (pronounced gang). Whenever he finds fluorite in the gangue, he can expect to find heavy metals, such as gold, silver, lead, zinc and others. Thus fluorite is of great economic importance simply as an indicator of other valuable minerals. To the metal miner, however, fluorite is a nuisance once he has found the valuable metallic minerals.

Fluorite has real economic importance on its own. The steel industry could not do without it. The characteristic of floworange, brown and colorless are common ,ing under high temperature is used to

coat the walls of the steel-making furnace. This coating keeps the molten iron from adhering to the walls, allowing a furnace lining (of fire brick) to be used for many meltings. This coating is known as flux, and without it, one or two meltings would be all that could be done in a furnace without installing a new lining. No substitute for this purpose has been found.

Fluorite is used to manufacture hydrofluoric acid, which is very corrosive and poisonous. It is the only acid that will dissolve quartz and glass, and thus must be stored in a plastic container. In the days before plastic containers, it was stored in bottles made of wax. These bottles were far from durable, and it can easily be seen that any breakage was a near catastrophy. Hydrofluoric acid is used in the manufacture of high octane gasoline—another important use for lowly fluorite. The mineral is also important in the manufacture of glass.



Fluorite cube twin.

During World War II, diamond powder was very important in the making of tools to produce machinery. It was suddenly found that the old methods of sorting crushed diamond to size was far too slow. Research for gravity sorting with the use of a flowing thick liquid resulted in the development of a machine known as an eluriator. This machine can sort diamond powder through a wide range of sizes, running day and night with only infrequent attention.

As diamond powder was scarce at the time, this research was carried out using crushed fluorite. It has the same cleavage as diamond, and very nearly the same specific gravity. Thus the particles of fluorite were almost exactly the same shape and weight of diamond, with the information gained being directly usable with diamond.

Fluorite has an important place in art and gem cutting. A large deposit of fine blue to purple was found many years ago in England. This is a very dense massive material, and few crystals are found here. It is known by the interesting name of Blue John, and has been carved into articles such as vases, bowls and figurines. The deposit is still worked today, but the output is now small, and the demand for worked articles is great, resulting in a very high price.

The gem cutter finds a limited use for fluorite. Cabochons may be cut from massive material, but the cleavage gives much trouble and the softness offers little durability for jewelry.

The softness and cleavage are coupled with a low refractive index, thus faceted gems exhibit a low brilliance which results in what we like to call an "empty look." This is the result of the lack of brilliance, allowing the viewer to seemingly look through the gem. The brilliant return of light by most normal gems hinders looking into them.

Regardless of these poor characteristics, the many colors are a strong incentive to produce color suites of faceted gems, but these are strictly for display purposes.

The English deposit mentioned earlier is the best known, but other deposits are also found in that country. America has a large deposit along the Ohio River in Illinois and Kentucky. Rosiclare and Cavein-Rock, Illinois have produced beautiful crystals, some over 12 inches across. Arizona is also an important producer. Much of the material used for furnace flux is imported from Mexico, Spain and Italy.

The finest crystals of all come from Switzerland and are delicate pink octahedrons. Mexican mines also furnish fine specimens of many colors.

The greatest portion of our population lives very nicely without any knowledge of this interesting mineral, but without its existence none of us would know the life style that we enjoy.





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Letters to the Editor

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Saloon Still Operates . . .

After reading the article "The Mines of Rand" in the June, 1974 issue of Desert, a matter has come to our attention which requires comment and clarification.

The article states the saloons in Randsburg are closed. One is still open for business, 'The Joint,' which for many years has been run by a lady named Olga. "The Last Chance" saloon closed in the summer of 1973.

We are frequent visitors in the Rand area and we know this to be true.

MR. & MRS. WALTER LAWETZKI, Whittier, California.

A Different Opinion . . .

Lester F. Ziegler's impressions about the San Gabriel Mountains in your June, 1973 issue are in stark contrast to mine. He continually extolls the mountains' ''unpopulated remoteness,'' ''remote isolation,'' and ''isolated grandeur,'' but seems to have neglected some details. Let's just say that the place is, in the summer time, over-crowded and pitifully smoggy. I would never suggest it for vacationing.

As far as gold goes, my father, during the great depression, sluiced the canyon for a living along with numerous others. Since that time, the place has been all but played out. Little remains now even for the novice.

And another thing, Mr. Ziegler says, "one is scarcely conscious of entering the canyon of a huge mountain range." This is nonsense. The mouth is clearly discernible. It's a minor matter, I know, but it distrubs me to find facts distorted.

ERIC SEIPLE, Montebello, California.

Puzzled About Lost Dutchman . . .

During some reading about the Lost Dutchman Mine, I came across a journalistic mystery as intriguing as that surrounding the whereabouts of the mine. This mystery involves major inconsistencies in three recent books: Barney Barnard's *The Story of Jacob Walzer* (1962), Curt Gentry's *Killer Mountains* (1968) and Robert J. Allen's historical

The Story of Superstition Mountain and the Lost Dutchman Mine (1971).

The accounts disagree on everything from the "Dutchman's" name to whether or not the mine has been found and where. For example: Allen presents much first-hand evidence to support his claim that the Dutchman's mine was the old 1548 Peralta mine and was rediscovered by Alfred Strong Lewis in 1948, near Goldfield (far from the center of the Superstitions).

However, Barnard, whom Allen openly considers an authority on the mine, scoffed at the suggestion that the Dutchman and Peralta mines were identical (Allen ignores Barnard's conclusion), while Barnard's description of the Lewis find omits the conviction of Lewis and others that they had, indeed, found the Dutchman-Peralta mine.

Furthermore, Allen ignores Gentry's calim that Glenn Magill used the so-called "Ruth-Peralta" maps and "finally rediscovered the Lost Dutchman mine" in a well-publicized expedition into the center of the Superstitions. Finally, Gentry fails even to mention the Lewis "find" in 1948.

Such is the pattern. This is no mere case of conflicting interpretations of the evidence, for these books deal with such different "evidence," they could be writing about totally different mysteries. (To add to the enigma, more recent mentions of the Lost Dutchman, e.g. Sunset's 1974 Guide to Arizona, ignore ALL claims that the mine has been found and suggest that there's a fortune hidden in the Superstitions.)

Perhaps the problem is merely one of bad journalism, but if *Desert Magazine* or any of its readers could provide information or references to help explain or resolve any of the major conflicts in the Dutchman stories, it would be most appreciated. Thank you.

MICHAEL S. BERLINER, West Los Angeles, California.

Concerning Mr. Pegleg . . .

History shall judge its children. There is nothing hidden that shall not be uncovered, nothing in darkness that shall not come to light.

Mr. Pegleg owes the Desert people this much:

- To reveal the whereabouts of the three golden buttes with an explanation as to why Pegleg himself could not find them the second time.
- To name the range of mountains, the south end of which Pegleg followed for one day before he climbed the butte.
- 3. To reveal the location of Smith Mountain with the name of the spring located at its base. Anyone can drink from the waters of the Hassayampa, but can "Mr. Pegleg" drink of the sweet waters at Smith Mountain?
- 4. It's a curiosity to historians which pass Pegleg used to leave the desert. Mr. Pegleg should have this information.

CHARLES M. CONARROE, San Francisco, Calif.

Calendar of Events

AUGUST 23-25, Fourth Annual American Indian Show and Sale, Frontier Hotel, Americana Room, Las Vegas, Nevada. Admission \$1.50 adults, children 50 cents.

AUGUST 31-SEPTEMBER 1, Labor Day Weekend. First Annual Four Wheeler Campout in the canyonlands of southeastern Utah, sponsored by the Moab Chamber of Commerce. A two-day overnight safari for four-wheel-drive vehicles and dune buggies. Highway licensed off-road vehicles and advance registration required. For details, write the Moab Chamber of Commerce, Moab, Utah 84532.

SEPTEMBER 14 & 15, El Cajon Valley Gem and Mineral Society, Inc., Show, Parkway Plaza, Fletcher Parkway, El Cajon, Calif. Chairman: Harvey Kline, 935 Taft, El Cajon, Calif 92020.

SEPTEMBER 18-22, Las Vegas Gem Club's 3rd annual "Spotlight on Gems," in conjunction with the Jaycee's State Fair, Convention Center, 3150 S. Paradise Rd., Las Vegas, Nevada. Dealers, demonstrations, field trip on Saturday. Contact Betty McCreless, 6261 Carey Ave., Las Vegas, Nevada 89110.

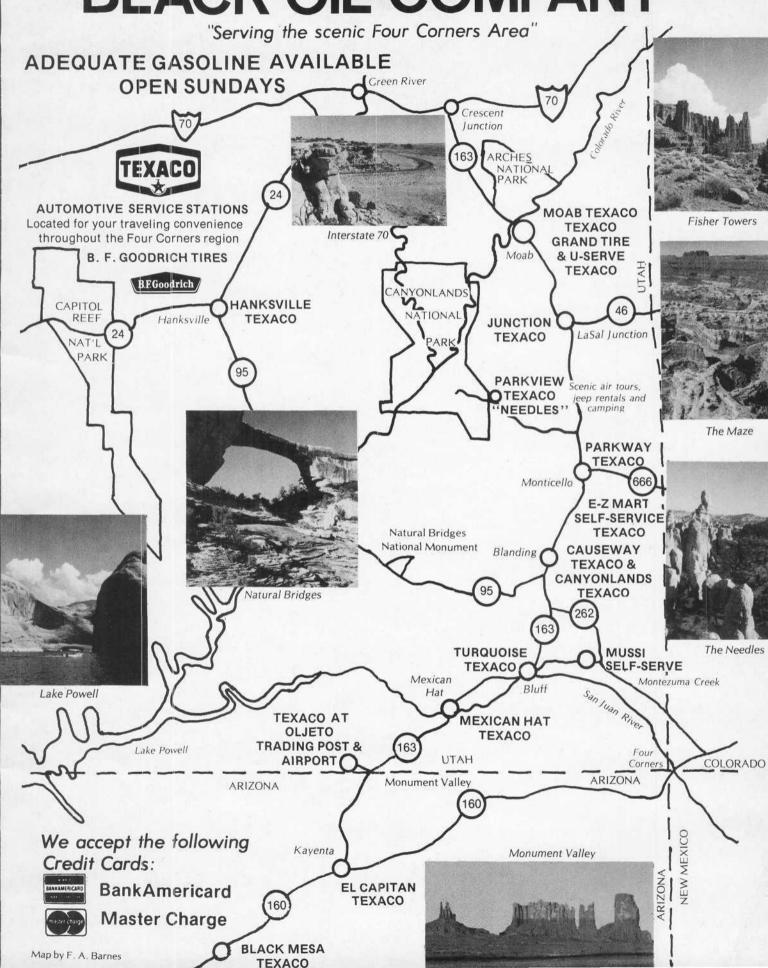
SEPTEMBER 21, Third Annual California Searchers Hunt, 1:00, Historic Pena Adobe near Vacaville, Calif. General Hunt, Ladies Hunt, Junior Hunt. All TH'ers welcome. For registration information, contact: Ed Tanner, 415-223-3388.

SEPTEMBER 21, "Recreation in Rocks" sponsored by the Peninsula Gem and Geology Society, Rancho Shopping Center, Foothill Expressway & South Springer Rd., Los Altos, Calif. Featuring gold panning, cutting material, handmade jewelry, cut geodes, etc. No Dealers.

OCTOBER 4-13, London Bridge Days, Lake Havasu City, Arizona. Third anniversary of the opening of historic London Bridge on the lower Colorado River.

OCTOBER 5 & 6, Second annual Bisbee Gem and Mineral Show, National Guard Armory, Bisbee, Ariz. Exceptional exhibitions by noted collectors and dealers.

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